

JON KROSNICK, PhD, 5-1-09

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1 IN THE UNITED STATES DISTRICT COURT FOR THE
2 NORTHERN DISTRICT OF OKLAHOMA
3
4

5 W. A. DREW EDMONDSON, in his)
6 capacity as ATTORNEY GENERAL)
7 OF THE STATE OF OKLAHOMA and)
8 OKLAHOMA SECRETARY OF THE)
9 ENVIRONMENT C. MILES TOLBERT,)
10 in his capacity as the)
11 TRUSTEE FOR NATURAL RESOURCES)
12 FOR THE STATE OF OKLAHOMA,)

13 Plaintiff,)

14 vs.) 4:05-CV-00329-TCK-SAJ

15 TYSON FOODS, INC., et al,)

16 Defendants.)

17 - - - - -
18 THE VIDEOTAPED DEPOSITION OF
19 JON KROSNICK, PhD, produced as a witness on
20 behalf of the Defendants in the above styled and
21 numbered cause, taken on the 1st day of May, 2009,
22 in the City of Tulsa, County of Tulsa, State of
23 Oklahoma, before me, Lisa A. Steinmeyer, a Certified
24 Shorthand Reporter, duly certified under and by
25 virtue of the laws of the State of Oklahoma.

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918-587-2878

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A P P E A R A N C E S

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I N D E X

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1 (Whereupon, the deposition began at 9:06
2 a.m.)

3 VIDEOGRAPHER: We are now on the Record for
4 the deposition of Dr. Jon Krosnick. The time is
5 9:06 a.m. The day is May 1st, 2009. Counsel, 09:06AM
6 please identify yourselves for the Record.

7 MR. DEIHL: This is Colin Deihl on behalf
8 of Cargill.

9 MR. TRIPLETT: Eric Triplett on behalf of
10 Cargill. 09:06AM

11 MR. JONES: Tim Jones for the Tyson
12 defendants.

13 MR. FREEMAN: Bruce Freeman for Simmons.

14 MR. PAGE: David Page for the State of
15 Oklahoma. 09:06AM

16 MS. MOLL: Ingrid Moll for the State of
17 Oklahoma.

18 VIDEOGRAPHER: Thank you. You may now
19 swear the witness.

20 JON KROSNICK, PhD
21 having first been duly sworn to testify the truth,
22 the whole truth and nothing but the truth, testified
23 as follows:

24 DIRECT EXAMINATION

25 BY MR. DEIHL: 09:06AM

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1 Q Please state your name.

2 A Jon Alexander Krosnick.

3 Q Have you ever been deposed before, Dr.
4 Krosnick?

5 A Yes, I have. 09:07AM

6 Q How many times approximately?

7 A About nineteen times.

8 Q So you're familiar with the process that's
9 going to take place here today?

10 A Yes, I am. 09:07AM

11 Q What did you do to prepare for your
12 deposition?

13 A I reread the reports that we prepared in this
14 case, and I looked at transcripts, rough transcripts
15 of some depositions taken prior to today, and met 09:07AM
16 yesterday with Ingrid Moll to discuss the case and
17 deposition today.

18 Q What rough transcripts did you look at?

19 A I looked at the transcript of Roger
20 Tourangeau's deposition and also David Chapman's 09:07AM
21 deposition.

22 Q Anyone else's?

23 A No.

24 Q Dr. Krosnick, I've handed you what's been
25 marked as Deposition Exhibit No. 1. Can you 09:08AM

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1 identify this document for me?

2 **A** Yes. This looks like my curriculum vitae.

3 **Q** Is this your current curriculum vitae?

4 **A** This is dated November 2008, and most likely
5 is the version that was turned over in this case on 09:08AM
6 about January 1st, 2009.

7 **Q** Has anything changed on your curriculum vitae
8 since January 1st, 2009?

9 **A** Yes.

10 **Q** Tell me what's changed. 09:08AM

11 **A** I've had additional papers accepted for
12 publication that would be listed in the publications
13 section. I've given additional lectures since then
14 that would be listed in the lectures section, and I
15 have received additional grant money that would be 09:09AM
16 listed under the grants section and I received an
17 award that would be listed under the awards section.

18 **Q** Tell me what the additional papers --

19 **A** Sorry. My mistake. I also -- no, I'm sorry.
20 Let me clarify. I would add some addresses to the 09:09AM
21 invited address section and some ordinary conference
22 presentations to the conference presentation
23 section.

24 **Q** Tell me what additional papers you would need
25 to add to make this CV current. 09:09AM

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1 **A** A paper that Allison Holbrook and I wrote on
2 the measurement of voter turnout in elections was
3 accepted by the Journal of Public Opinion Quarterly
4 after this. A paper that I wrote with Lin Chiat
5 Chang, L-I-N, capital C-H-I-A-T, Chang, on survey 09:10AM
6 measurement was accepted in the Journal of Public
7 Opinion Quarterly. I have written a chapter to be
8 published in the Handbook of Social Psychology with
9 Penny Visser, V-I-S-S-E-R. I have written a chapter
10 with Stanley Presser to appear in the Handbook of 09:10AM
11 Survey Research, and there might be one or two
12 others that I'm forgetting.

13 **Q** Do you have a current copy of your curriculum
14 vitae at your office?

15 **A** It exists electronically, yes. 09:11AM

16 **Q** Okay. The article that you wrote with Lin --

17 **A** Lin Chiat Chang.

18 **Q** -- Chiat Chang, tell me what the nature of
19 that article was about.

20 **A** That article is a comparison of three 09:11AM
21 different methods of collecting survey data. One
22 random digit dial telephone interviewing, the second
23 is Internet survey data collection from a
24 representative national sample, and the third is
25 Internet survey data collection from a 09:12AM

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1 non-representative sample.

2 Q You also indicated you have -- you would have
3 additional lectures to add to this list?

4 A Yes.

5 Q What would those be? 09:12AM

6 A Okay. Working backwards, so I gave three
7 lectures at the University of Washington. I'm
8 trying to reconstruct my calendar here backwards.
9 You know, it's hard. It would be easier to just
10 give you the thing if you don't mind. 09:13AM

11 Q You do have a copy you can provide to us?

12 A Yes, we can.

13 Q Okay. Have you done any writing since January
14 1st of 2009 concerning the contingent valuation
15 method? 09:13AM

16 A Not that I recall.

17 Q Dr. Krosnick, I've handed you what's been
18 marked as Deposition Exhibit No. 2. Can you
19 identify this document for me?

20 A This looks like a listing of my involvement in 09:14AM
21 legal matters as an expert since 2003.

22 Q Have you -- and these are cases where you have
23 testified in court; is that correct?

24 A As you can see, at the end of each little
25 paragraph it says what I did in each case. So for 09:14AM

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1 the first paragraph it says, written report, oral
2 deposition, and since it doesn't say court
3 testimony, that would be the information you need to
4 know that I did not testify. So in some cases I
5 have testified; in some I have not.

09:14AM

6 **Q** Okay, and this is since 2003?

7 **A** That's correct.

8 **Q** Approximately how many times --

9 MR. DEIHL: Why don't we go off the Record
10 for a moment.

09:15AM

11 VIDEOGRAPHER: We are now off the Record.
12 The time is 9:15 p.m.

13 (Whereupon, a discussion was held off
14 the Record.)

15 VIDEOGRAPHER: We are back on the Record.
16 The time is 9:17 a.m.

09:17AM

17 **Q** Dr. Krosnick, this exhibit, Exhibit 2,
18 contains the matters in which you've been retained
19 since 2003. Can you estimate how many times you
20 have testified in court as an expert witness?

09:18AM

21 **A** About four, I believe.

22 **Q** And how many times have you been deposed as an
23 expert witness?

24 **A** About nineteen.

25 **Q** Taking a look at this list of court testimony,

09:18AM

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1 the first entry is Dollar Financial versus Vernell
2 Woods; do you see that?

3 **A** I do.

4 **Q** What was the nature of that case?

5 **A** I don't remember for sure, but I think that 09:18AM

6 the managers of Dollar Financial Stores were treated

7 by their employer as exempt employees, and

8 California law is such that if managers spend more

9 than 50 percent of their work time performing

10 non-exempt work, then they actually should be paid 09:19AM

11 for overtime above 40 hours a week. So the topic of

12 that case, I believe, was whether those individuals

13 were in fact spending more time than half of their

14 time performing non-exempt work.

15 **Q** What was the nature of your opinion in that 09:19AM

16 case?

17 **A** I don't remember for sure, but my recollection

18 is that I offered an opinion about conducting a

19 survey in the case in order to assess whether this

20 was -- the assertion was true or not. 09:19AM

21 **Q** Who retained you in that case?

22 **A** The plaintiffs, the class.

23 **Q** What law firm was representing the plaintiffs?

24 **A** I don't remember. I'm sorry.

25 **Q** Who paid your bills? 09:19AM

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1 **A** The law firm.

2 **Q** You don't remember the name of the law firm?

3 **A** I don't.

4 **Q** Do you have records of that somewhere?

5 **A** Yes. 09:20AM

6 **Q** How about in the next case, Maria Chavez?

7 **A** Uh-huh.

8 **Q** What was the nature of that lawsuit?

9 **A** It was a class action lawsuit brought on
10 behalf of employees of Tyson Chicken processing 09:20AM

11 plants. The employees spent some of their time
12 putting on and taking off protective gear to be used
13 while they were doing work processing chickens, and
14 Tyson did not pay the employees for the work that
15 they did, putting on and taking off and cleaning up 09:20AM
16 that equipment, and so the lawsuit was brought
17 requesting payment to the employees for what the
18 class considered to be work time.

19 **Q** Who was your client in connection with that
20 case? 09:20AM

21 MS. MOLL: Objection to form.

22 **A** I was retained -- well, I testified on behalf
23 of Tyson. I don't know technically whether you
24 would say the law firm was my client or Tyson was my
25 client. You want me to tell you the answer to that 09:21AM

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1 so I can speed you up in the future or --

2 Q I think you answered my question. I
3 appreciate it.

4 A Okay.

5 Q And what was the nature of your testimony in 09:21AM
6 that case?

7 A A survey had been done on behalf of the class
8 of class members, and I was asked by Tyson and the
9 law firm to evaluate the quality of the survey.

10 Q Do you recall the law firm that was involved 09:21AM
11 in that matter?

12 A That retained me?

13 Q Yes.

14 A No. It was one of the big ones. Might have
15 been -- no. I shouldn't speculate, but it's 09:21AM
16 gettable.

17 Q Okay. How about the next matter; what was the
18 nature of your testimony in the United States
19 Securities and Exchange versus Kevin A. Howard, et
20 al? 09:22AM

21 A These gentlemen here -- that are listed here
22 were defendants in one of the Enron cases, and the
23 question came up about whether there should be a
24 change of venue of the case out of Houston because
25 of concerns that it would be difficult to generate 09:22AM

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1 an unbiased jury in Houston.

2 Q What was the nature of your report in that
3 case?

4 A I conducted a survey in Houston and some other
5 areas to evaluate public knowledge of the case and 09:22AM
6 beliefs about it.

7 Q In any of the cases listed on what's been
8 marked as Deposition Exhibit 2, did you testify in a
9 matter regarding contingent valuation?

10 A No. 09:23AM

11 Q Have you ever provided expert witness
12 testimony regarding a contingent valuation report?

13 A Yes, I have.

14 Q Where?

15 A Washington, D.C. 09:24AM

16 Q What was the nature of that testimony?

17 A I was a co-investigator of what has come to be
18 known affectionately as the Montrose case, and we
19 conducted a survey in that case, and I was deposed
20 in that case. 09:24AM

21 Q Any other times?

22 A Sorry. Can you just repeat? Any other times
23 what? I'm sorry.

24 Q Any other times you've testified in a matter
25 regarding contingent valuation surveys? 09:24AM

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1 **A** Of course, other than this one?

2 **Q** Right.

3 **A** No.

4 **Q** You said you did testify in what's known now
5 as the Montrose matter; correct?

09:24AM

6 **A** Yes.

7 **Q** What was the nature of your testimony in that
8 matter?

9 **A** Well, I was one of the team members who
10 designed and conducted and analyzed and reported on
11 the results of a survey, and so my testimony was
12 about the survey that we conducted.

09:25AM

13 **Q** What was the survey that you conducted?

14 MS. MOLL: Objection to form.

15 **A** You want to rephrase?

09:25AM

16 **Q** No.

17 **A** Okay. It was a survey of a representative
18 sample of California residents asking them questions
19 about a deposit of DDT and PCBs on the floor of the
20 ocean off the coast of Los Angeles.

09:25AM

21 **Q** Do you recall your opinion in that case?

22 **A** I had many opinions in that case.

23 **Q** Did you determine a willingness to pay
24 estimate in that matter?

25 **A** The survey did yield an estimate of

09:26AM

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1 willingness to pay, yes.

2 Q Do you recall what that estimate of
3 willingness to pay was?

4 A Well, there was more than one. One of them
5 for the set of injuries for two bird species and two 09:26AM
6 fish species was about \$63 on average, and one
7 estimate for just the two fish species alone was
8 about \$29.

9 Q Did you produce a single report in that case
10 or multiple reports? 09:26AM

11 A Well, the team produced a large multi-volume
12 document reporting on all of the findings and
13 methods of the study, but undoubtedly many other
14 documents were turned over. So I'm not quite sure
15 how to count. 09:27AM

16 Q Who was on the team?

17 A Richard Carson, Robert Mitchell, Michael
18 Hanemann, Kerry Smith, Paul Ruud, R-U-U-D, Stanley
19 Presser, myself of course, and I think that would be
20 it. I'm sorry. Let me be clear. That's the team 09:27AM
21 of the principals. There was a staff of folks that
22 worked with us as well.

23 Q Was Stratus involved in that case?

24 A Stratus was not a part of our team, no.

25 Q Was Stratus involved in that case? 09:27AM

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1 **A** I can't speak to what Stratus may have done.

2 I'm not aware. Stratus -- no one -- how to say
3 this -- no one working with our group was affiliated
4 with Stratus as a part of that project.

5 **Q** Okay. Now, a past damages calculation was 09:28AM
6 done in connection with that matter; correct?

7 **A** I don't recall.

8 **Q** Were you involved in doing a past damages
9 calculation in that matter?

10 **A** No. 09:28AM

11 **Q** Were you asked to do a past damages
12 calculation in that matter?

13 **A** I have no recollection.

14 **Q** Dr. Bishop testified yesterday that -- strike
15 that. I understand that the Montrose contingent 09:28AM
16 valuation study, of which you were a part, was
17 excluded by the court. Is that your understanding?

18 **A** I don't have a specific recollection of that,
19 no.

20 **Q** Did you ever testify in court in that case? 09:29AM

21 **A** No.

22 **Q** Do you know why not?

23 **A** I don't.

24 **Q** Did you believe that it was appropriate to do
25 a past damages calculation in connection with the 09:29AM

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1 Montrose survey?

2 **A** I have no --

3 MS. MOLL: Objection to form.

4 **A** Sorry. I have no opinion about that.

5 **Q** Did you ever have an opinion about that? 09:29AM

6 **A** No, not that I'm aware of.

7 **Q** You can't recall sitting here today?

8 **A** Past damages is not a topic that I have
9 thought at all about to any significant degree in my
10 work. 09:29AM

11 **Q** Okay. Who did you work for in the Montrose
12 case?

13 **A** Once again, that's a good question. So I
14 believe I billed a firm, private firm called Natural
15 Resources Damage Assessment, Inc., and I assume that 09:30AM
16 they billed a law firm, and I assume that the law
17 firm billed the State of California and the federal
18 government, The National Oceanic & Atmospheric
19 Administration in particular. So I'm not sure which
20 of those is the right answer to your question. 09:30AM

21 **Q** Do you know who the principals were in Natural
22 Resource Damages Assessment, Inc.?

23 **A** Can you define what principals means?

24 **Q** The owners of Natural Resources Assessment
25 Damages, Inc. 09:30AM

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1 **A** I believe Richard Carson was an owner, and I'm
2 sure that there were other owners, but I don't know
3 for sure who they were.

4 **Q** Was David Chapman involved in the Montrose
5 case in any way?

09:31AM

6 **A** Yes, he was.

7 **Q** What was his involvement?

8 **A** He worked for the federal government at NOAA,
9 N-O-A-A, and he was one of the NOAA staff people who
10 worked with our team during the course of that case.

09:31AM

11 **Q** When approximately did you produce your report
12 in that matter?

13 **A** In the early 1990s, I believe.

14 **Q** And you said you testified in Washington, D.C.
15 Was that in a deposition?

09:31AM

16 **A** Correct.

17 **Q** Do you know an individual named -- strike
18 that. Was the -- did the -- did the Montrose case
19 involve both use and non-use valuation?

20 **A** Yes.

09:32AM

21 **Q** So it was a total value survey?

22 **A** Correct.

23 **Q** And what was your role on the team in the
24 Montrose case?

25 **A** I participated in the questionnaire design

09:32AM

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1 process by observing focus groups and one-on-one
2 cognitive interviews and working with the team to
3 revise the questionnaire over a period of time. I
4 advised on statistical analyses to be conducted and
5 looked at results, interpreted results, worked with
6 the team in revising the report that was drafted and
7 then, of course, was deposed.

09:32AM

8 **Q** Setting aside the Montrose study, have you
9 prepared a CV survey that has been accepted as
10 expert work by a court of law?

09:33AM

11 MS. MOLL: Objection to form.

12 **A** I don't know about when courts do or do not
13 accept pieces of research.

14 **Q** What other court cases have you been involved
15 in where you've prepared a contingent valuation
16 survey?

09:33AM

17 **A** So I've told you already that the Montrose
18 case is one case.

19 **Q** And I said setting that aside. So what other
20 ones?

09:34AM

21 **A** And this is the second one.

22 **Q** Okay.

23 **A** And that -- those are the only two court cases
24 that I've been involved in preparing a CV survey for
25 the court. Now, your question earlier left open the

09:34AM

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1 possibility that one of our CV surveys could have
2 been accepted by a court in another case, and I'm
3 not aware of that one way or another.

4 **Q** You're not aware of any cases in which the
5 court has accepted expert work you've done
6 concerning a contingent valuation survey; correct?

09:34AM

7 **A** That's not what I said. What I'm saying is
8 that as an expert, I'm not aware that there is a
9 moment -- you're implying that there's a moment in
10 the lawsuit when a court either decides to accept a
11 piece of research or decides not to accept it, and
12 that may well be true. I don't have legal training
13 enough to know that. So I'm not qualified to answer
14 your question about whether any of my CV work has or
15 has not ever been accepted by a court.

09:34AM

09:35AM

16 **Q** Have you ever testified in court regarding any
17 of your CV work?

18 **A** No, I have not. Sorry. I'm going to correct
19 that answer. I have testified in court as an expert
20 in survey research, and in the course of that
21 testimony, I have based opinions on and on occasion
22 cited research in the contingent valuation area, and
23 so I guess to properly answer your question, the
24 right answer would be that I have testified in
25 court, and the opinions expressed have been partly

09:35AM

09:36AM

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1 based upon my contingent valuation work.

2 **Q** In those matters that you're now referring to,
3 you did not prepare an expert report regarding a
4 contingent valuation survey that was prepared
5 primarily for the matter in which you were 09:36AM
6 testifying; isn't that right?

7 **A** That's correct.

8 **Q** Now, let's talk a little bit about this matter
9 at hand, Tenkiller Lake and the Illinois River.

10 **A** Okay. 09:36AM

11 **Q** How did you come to be hired as an expert
12 witness in this case?

13 **A** In late 2007 I was contacted by David Chapman
14 from Stratus Consulting, and Mr. Chapman told me
15 that a case was being developed and asked whether I 09:37AM
16 might be open to participating in that case as a
17 member of a research team, and that was the
18 beginning of a series of discussions that led to my
19 joining the team.

20 **Q** When did you first begin doing work related to 09:37AM
21 the Illinois River, and for purposes of this
22 question when I say Illinois River or Illinois River
23 watershed, I'm referring to both Tenkiller Lake and
24 the Illinois River. Is that fair?

25 **A** It's quite fair. I've done the same myself. 09:37AM

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1 So I began doing work at just around January 1,
2 2008 -- excuse me -- yeah, 2008.

3 Q What were you asked to do at that time?

4 A I was asked to join a team designing a
5 contingent valuation survey, and so that involved 09:37AM
6 all steps of the process, preparing the
7 questionnaire, overseeing the data collection,
8 overseeing the data analysis, contributing to the
9 report writing and ultimately, if necessary,
10 providing testimony. 09:38AM

11 Q At the time you joined the team, had the team
12 already conducted a recreation intercept survey?

13 A I believe that's true.

14 Q Were you provided a copy of that survey?

15 A I don't recall. 09:38AM

16 Q Do you recall ever reviewing that survey?

17 A I do not recall reviewing it.

18 Q Okay. Were you aware that a telephone survey
19 was conducted by Stratus?

20 A Yes. 09:38AM

21 Q Were you involved in that survey?

22 A No, I was not.

23 Q Did you ever review that survey?

24 A I may have looked at a report of numbers from
25 that survey, but I'm not certain. 09:39AM

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JON KROSNICK, PhD, 5-1-09

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1 **Q** Sitting here today, you can't recall looking
2 at a report of numbers from that survey?

3 **A** Sitting here today, I've told you I might have
4 seen a report of numbers but I'm not sure.

5 **Q** Okay. What do you remember from that survey, 09:39AM
6 if anything?

7 **A** No findings other than a telephone survey was
8 done. Can we turn that volume all the way down?

9 **Q** At the time you were retained, had the team
10 already decided to conduct a contingent valuation 09:39AM
11 survey?

12 **A** No.

13 **Q** Were you involved in the decision to conduct a
14 contingent valuation survey?

15 **A** I was. 09:39AM

16 **Q** Tell me about that decision. How was it made?

17 **A** Well, I don't know the whole history of it,
18 but I can tell you the part I know, that the team
19 was considering a variety of different methods that
20 could be used to produce a value estimate in this 09:40AM
21 case. The one I remember other than contingent
22 valuation is called habitat equivalence analysis I
23 believe, HEA are the initials, and I was brought on
24 at a time when the team was considering doing
25 contingent valuation, and I was asked about my 09:40AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**25**

1 opinion about whether a contingent valuation could
2 be done in this case and whether it could yield
3 accurate measurements of total value, and I
4 concluded that it could, and I made a trip to
5 Oklahoma to make a presentation to representatives
6 of the State on how contingent valuation is
7 conducted and could be done in this case, and that's
8 essentially what I contributed, and then learned
9 that the decision had been made to do contingent
10 valuation.

09:41AM

09:41AM

11 **Q** You indicated that the team was looking at a
12 variety of different methods, and you mentioned HEA.
13 Were there any other methods that the team looked at
14 besides HEA and contingent valuation?

15 **A** As far as I know, those are the only two that
16 received serious consideration.

09:41AM

17 **Q** How did the team decide which methods to
18 consider in deciding how to do a study that could
19 yield accurate measures of values in this watershed?

20 MS. MOLL: Objection to form.

09:42AM

21 **A** I can't answer that question.

22 **Q** Why not?

23 **A** I don't know the answer.

24 **Q** Okay. Who made the decision to conduct a
25 contingent valuation survey?

09:42AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**26**

1 **A** Well, our team of experts considered the
2 options and recommended that contingent valuation
3 was the method most likely to yield the most
4 accurate measurements of total value. That
5 recommendation was conveyed to attorneys working in 09:42AM
6 this case, who passed it on to the Attorney
7 General's Office, the State more generally, who then
8 approved and authorized the pursuit of that
9 recommendation in our work.

10 **Q** Why did you believe that contingent valuation 09:42AM
11 was the methodology most likely to result in
12 accurate measure of damages?

13 **A** Okay. So you have misstated my testimony. I
14 did not say I believed that. What I said I believed
15 is that it would yield an accurate measurement of 09:43AM
16 total value, but others on the team made the
17 comparative assessment with other methods.

18 **Q** Okay. So you didn't make that comparative
19 assessment?

20 **A** Correct. 09:43AM

21 **Q** Okay. Do you know why the HEA method was
22 rejected?

23 **A** I wouldn't say it was rejected. I would
24 simply say that contingent valuation was chosen, and
25 I don't know the reasons. 09:43AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**28**

1 what's Kelly's last name. Well, you know. A
2 representative from the Attorney General's Office,
3 an attorney with the Attorney General's Office in
4 Oklahoma, Kelly -- okay. Fred Baker was there, who
5 is an attorney with Motley Rice. I can't tell you 09:45AM
6 with confidence who else was there.

7 **Q** Are you currently involved in any other
8 projects where a contingent valuation survey is
9 being conducted?

10 **A** No. 09:46AM

11 **Q** Are you currently working with the Stratus
12 Consulting group on any projects other than this
13 one?

14 **A** No. Well, sorry. Let me clarify something.
15 So that answer is correct, but I just don't want you 09:46AM
16 to be misled in the following way.

17 **Q** I appreciate that.

18 **A** Stratus is doing a project with the National
19 Oceanic & Atmospheric Administration, and they have
20 designed the project. I had no role in designing 09:46AM
21 the project. They're about to collect data for that
22 project. I don't know whether it's a contingent
23 valuation project or not, might be, but some of the
24 data for that project will be collected from
25 respondents who are participating in a research 09:47AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**29**

1 project I direct, and so I will see the data from
2 that project once they are collected, but I can't
3 say I'm working with them on that other than
4 allowing that data collection to happen.

5 **Q** Thank you for the clarifications. When you 09:47AM
6 were hired to work on this project, who else was
7 already on the team?

8 **A** Well, I know for sure that David Chapman was
9 directing the team, and Richard Bishop was on the
10 team and Michael Hanemann was on the team and Roger 09:47AM
11 Tourangeau was on the team and Edward Morey was on
12 the team. Let's be clear that I'm speaking of the
13 team that ultimately conducted the contingent
14 valuation survey. There are many people involved as
15 experts and support people for this case, but I'll 09:48AM
16 confine my answer to that group.

17 **Q** Fair enough. What expertise did you bring to
18 the team?

19 **A** I brought considerable experience with
20 contingent valuation in particular and also 09:48AM
21 expertise as a social scientist, more generally with
22 knowledge about survey questionnaire design, survey
23 data collection, statistical analysis of survey data
24 and the writing of reports on survey data, as well
25 as experience as an expert witness in legal 09:48AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 settings.

2 **Q** You said you had considerable experience with
3 contingent valuation. Describe that experience to
4 me.

5 **A** So I described to you already the Montrose 09:49AM
6 case that I worked on. In addition to that, I
7 worked on a case -- excuse me, a study
8 affectionately referred to as Cal Oil, C-A-L, O-I-L,
9 and that was a contingent valuation study done in
10 the state of California, and those were two very 09:49AM
11 large-scale, high-quality studies. In addition, I
12 had done smaller scale studies, one done in Ohio of
13 river water pollution, and I had done analysis of
14 data for publication from contingent valuation
15 studies that others had designed and collected the 09:50AM
16 data for, including a study of the Exxon Valdez,
17 V-A-L-D-E-Z, oil spill, and I had done small-scale
18 experimental studies of questionnaire design issues
19 for contingent valuation studies.

20 **Q** The Cal Oil CV study that you referred to, 09:50AM
21 tell me what that was about.

22 **A** Small oil spills happen regularly along the
23 coast of California as tankers travel up and down
24 that coast, and the State of California was
25 interested in generating an estimate of value in a 09:51AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 method that could be applied generically, so that
2 rather than -- for example, in the Montrose case
3 where there were specific damages of interest, the
4 State was interested in developing a method to
5 assess public value for the damage of oil spills
6 that could happen in the future. So that once this
7 method was developed, it could be used in the future
8 again and again tailored to each of those instances.
9 So we were asked to develop that method.

09:51AM

10 **Q** And you also mentioned a project you worked on
11 in Ohio regarding river water pollution. What was
12 that about?

09:51AM

13 **A** We were interested in that project in
14 comparing two different ways of measuring
15 willingness to pay in contingent valuation surveys,
16 what's called the referendum format and an
17 open-ended question format, and so we did a survey
18 in Ohio describing river water pollution to
19 respondents and measuring value in each of those two
20 ways to compare their validities.

09:52AM

09:52AM

21 **Q** Did you write an article about that study?

22 **A** We are drafting it now.

23 **Q** You indicated that one of the areas of
24 expertise that you brought to the team was
25 questionnaire -- expertise in questionnaire design

09:53AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**32**

1 issues. Did I hear you correctly?

2 **A** Yes.

3 **Q** What did you mean by questionnaire design
4 issues?

5 **A** Well, a questionnaire is a sequence of 09:53AM
6 questions asked of respondents in a survey, and
7 researchers designing a questionnaire must decide
8 how to word those questions, how to structure those
9 questions and how to order those questions, and I am
10 an author of a book being completed now called The 09:53AM
11 Handbook of Questionnaire Design to be published by
12 Oxford University Press, which will review about a
13 hundred years' worth of research throughout the
14 social sciences on questionnaire design issues that
15 I just described, and making recommendations on how 09:53AM
16 to make those decisions in the course of conducting
17 a research project. For decades I have been
18 teaching courses around the world on those matters.

19 **Q** Is the book that you just referenced listed on
20 your CV? 09:54AM

21 **A** Yes, it is.

22 **Q** Can you point it out for me, please?

23 **A** It's on Page 12, about two-thirds of the way
24 down. Authors are Krosnick and Fabrigar,
25 F-A-B-R-I-G-A-R. 09:54AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Q When do you expect that book to be published?

2 A Probably two years from now.

3 Q When did you begin writing this book, The
4 Handbook of Questionnaire Design?

5 A Heartbreaking question. Little hard to say 09:55AM
6 but probably 1990 let's say formally.

7 Q Been working on it a long time?

8 A Yes, I have. Big project.

9 Q Who is your co-author?

10 A Lee Fabrigar is a professor at Queens 09:55AM
11 University in Canada.

12 Q Has Lee Fabrigar been working with you over
13 that period of time?

14 A He worked with me early on. I've taken the
15 project over in recent years. 09:55AM

16 Q In designing questionnaires, how does a
17 researcher like yourself determine that you have
18 a -- I'm searching for a word -- how does a
19 researcher -- let me start again. In designing
20 questionnaires, what sort of information are you 09:56AM
21 trying to put into the questionnaire; what are you
22 trying to accomplish in a questionnaire design?

23 MS. MOLL: Objection to form.

24 A Finally that -- I got the end of it.

25 Q Let me try again. 09:56AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**34**

1 **A** Okay.

2 **Q** What are you trying to accomplish in
3 questionnaire design?

4 **A** Okay. So an optimal questionnaire is one that
5 respondents can understand easily, that respondents 09:56AM
6 interpret in the way it is intended by the
7 researchers and that produce as accurate as possible
8 measurements of the constructs of interest.

9 **Q** How do you make sure that in an optimal
10 questionnaire the respondents understand the 09:57AM
11 questionnaire?

12 **A** I think what you mean to ask is how do I make
13 sure in a questionnaire, not in a --

14 **Q** Yes.

15 **A** Good. I'll answer that one. So there are a 09:57AM
16 set of method that one uses. First, one bases the
17 design of the questionnaire on established
18 literature and principles learned from past research
19 about how to optimize understanding. Secondly, one
20 conducts pretest studies that assess respondent 09:58AM

21 understanding of the questions, identify
22 misunderstandings and take steps to make
23 corrections, and then finally one analyzes the data
24 obtained with the questionnaire statistically to
25 assess whether it is performing as would be expected 09:58AM

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JON KROSNICK, PhD, 5-1-09

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1 based on theory and past research if the respondents
2 understand the questions.

3 Q If a questionnaire is not designed properly,
4 is it fair to say that the resulting willingness to
5 pay will not accurately value the natural resources
6 damages?

09:58AM

7 A Okay. So I'm going to change your question a
8 little bit. You said if the questionnaire is not
9 designed properly. That's not a term I would use,
10 so I'm going to give you the benefit of the doubt
11 here and see if I can guess what you really mean to
12 say if the questionnaire is not designed optimally,
13 and then if you could just repeat the second half of
14 your question.

09:58AM

15 Q Sure. If the questionnaire is not designed
16 optimally, will the resulting willingness to pay
17 number not accurately value natural resource
18 damages?

09:59AM

19 A No. We have no way to know that.

20 Q What do you mean you have no way to know that?

09:59AM

21 A Well, so when -- let's begin with the first
22 half of your question. So you said if the
23 questionnaire is not designed optimally. So let's
24 take an example of how a questionnaire could be not
25 designed optimally.

09:59AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Q Sure.

2 A So a contingent valuation survey questionnaire
3 is typically a lengthy document. There are many
4 words in it. One could make a choice about how to
5 describe something. For example, this is a little 09:59AM
6 silly, but one could say not lengthy, which is three
7 syllables, or one could say short, and not lengthy,
8 being three syllables, is not optimal compared to
9 short, one syllable familiar word, easy to
10 understand. If we were to take the word short out 10:00AM
11 of the questionnaire and replace it with not optimal
12 -- excuse me, not lengthy, that would be a step in
13 the direction of non-optimality in the design.

14 Now, is that going to change the accuracy of
15 the CV measurement? I can't tell you just simply 10:00AM
16 from that because it's quite possible that even
17 though not lengthy is three syllables, that it
18 doesn't actually change respondents' understanding,
19 it doesn't change the experience of participating in
20 the interview, doesn't change the measurements 10:00AM
21 produced.

22 Q Really the only way to tell whether it would
23 change the willingness to pay number, would be to do
24 another questionnaire substituting short for not
25 likely or whatever your example was; isn't that 10:01AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**37**

1 right?

2 **A** That's exactly right.

3 **Q** The reason that you try to design an optimal
4 questionnaire -- one of the reasons you try to
5 design an optimal questionnaire is to arrive at
6 accurate results; right?

10:01AM

7 **A** Yes.

8 **Q** If the questionnaire isn't optimal, you may
9 not arrive at accurate results; right?

10 **A** Well, any -- sorry. You're exchanging words
11 in your question. So you said you may not arrive at
12 optimal results.

10:01AM

13 **Q** Accurate.

14 **A** Accurate results, okay. So the purpose of a
15 contingent valuation survey is to provide the most
16 accurate measurement possible, and so one wouldn't
17 say here is an accurate result and here is an
18 inaccurate result. So we optimize the design in
19 order to maximize the accuracy. So there isn't a
20 magic line and you'd say, well, you know, you could
21 go below that line or above that line.

10:01AM

10:02AM

22 **Q** Is there a way to determine the actual
23 willingness to pay of all Oklahoma residents for
24 natural resource damages to Tenkiller Lake and the
25 Illinois River?

10:02AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 MS. MOLL: Objection to form.

2 A Yes.

3 Q How would you do that?

4 A A contingent valuation survey.

5 Q But a contingent valuation survey, you just 10:02AM
6 told me, is an effort to get an accurate estimate of
7 willingness to pay. How do you determine the actual
8 willingness to pay of all Oklahoma residents?

9 MS. MOLL: Objection to form.

10 A That's how we do it. 10:02AM

11 Q Couldn't you go and ask every resident in the
12 state of Oklahoma?

13 A Sorry, ask them what?

14 Q Ask them what their willingness to pay is.

15 A Yes, you could do that. 10:03AM

16 Q Would that provide a more accurate estimate of
17 willingness to pay than using a sample of Oklahoma
18 residents?

19 A Ah, I see what you mean. So you're asking me
20 would a census of all Oklahomans provide a more 10:03AM
21 accurate answer than a sample survey interviewing
22 only a portion of the Oklahoma residents?

23 Q Yes.

24 A Okay, great. So in that case, it may produce
25 a more accurate result. It may not produce a more 10:03AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**39**

1 accurate result. You cannot know, and we can only
2 determine it by doing the two side by side.

3 Q The same would be true if you did a statewide
4 referendum of Oklahoma residents?

5 A You've got to tell me when you say the same, 10:03AM
6 what is the same that would be true?

7 Q If you were to do a statewide referendum of
8 Oklahoma residents asking them to vote on their
9 willingness to pay in an election, what would that
10 tell you about their willingness to pay? 10:04AM

11 A What would that tell me about their
12 willingness to pay? It would tell me how they voted
13 on that referendum, and one could imagine that as an
14 indicator of willingness to pay but it would
15 certainly not be a precise one. 10:04AM

16 Q What design issues exist in connection with CV
17 studies?

18 A I don't know what design issues are.

19 Q Okay. When you're putting together the
20 questionnaire, what are the issues that you're 10:05AM
21 focusing on?

22 A I'm sorry, I don't know what issues are.

23 Q When you put together a questionnaire, tell me
24 how you go about trying to design a questionnaire
25 that people can understand. 10:05AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** Okay. So I think I've told you this before.
2 So we specify the constructs that we wish to measure
3 and then draft questions intended to measure those
4 constructs. Then we subject those questions to
5 pretesting, and this process of drafting is often 10:05AM
6 informed by discussions with individuals who might
7 be respondents, such as through focus group
8 discussions. It's informed by reading past
9 literature. It's informed by reading public
10 documents on the matter being investigated. After 10:06AM
11 the questions are evaluated through cognitive
12 interviewing, they are subjected to administration
13 with a pilot study or pretest sample typically in
14 high-quality studies and those data are analyzed to
15 assess whether the questions are performing as 10:06AM
16 intended.

17 **Q** And when you say whether the questions are
18 performing as intended, you already said that that
19 means that the respondents are interpreting them in
20 the ways intended by the researchers? 10:06AM

21 **A** That's correct.

22 **Q** And I thought you said earlier that one of the
23 areas of expertise that you brought to the team was
24 expertise in design issues. Did I hear you wrong?

25 **A** We could look back at the transcript, but I 10:07AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**41**

1 don't -- you know, I don't recall particularly.

2 **Q** That wouldn't be something that you thought
3 you had expertise in?

4 **A** Sorry. Let me be really clear. I know what I
5 have expertise in and I'm happy to tell you. A 10:07AM
6 moment ago when you used the word issues in the
7 question, I wanted to understand what you wanted me
8 to do in interpreting that term, and I told you I
9 didn't know what you meant, and I asked you to
10 clarify that. 10:07AM

11 **Q** Fair enough. Now I'm asking you, I thought
12 you said earlier that you brought to the team
13 expertise in design issues.

14 **A** I may have said questionnaire design issues,
15 survey design issues certainly. 10:07AM

16 **Q** And what did you mean by that; what did you
17 mean by the term issues?

18 **A** Decisions to be made.

19 **Q** Dr. Krosnick, I've handed you an E-mail dated
20 January 8th, 2007 from you or, excuse me, from David 10:08AM
21 Chapman to you that's been marked as Deposition
22 Exhibit No. 3. Do you have that in front of you?

23 **A** Yes, I do.

24 **Q** In this E-mail David Chapman writes to you,
25 Jon, the attorneys approved us moving forward on the 10:09AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**42**

1 media content analysis effort. What's your
2 understanding of what the media content analysis
3 effort was?

4 **A** I think the intent was to gather up news media
5 stories that had been printed or broadcasted in
6 Oklahoma about the pollution of water in Oklahoma
7 rivers and lakes and to analyze what had been said
8 in those news stories.

10:09AM

9 **Q** What was the purpose of this media content
10 analysis?

10:09AM

11 **A** To inform the team if there was a significant
12 amount of publicity about these issues so that we
13 would know what information some Oklahoma residents
14 might have prior to the administration of our
15 survey.

10:10AM

16 **Q** Did you conduct the media content analysis?

17 **A** No.

18 **Q** Did anyone conduct the media content analysis?

19 **A** I believe that no formal media content
20 analysis was conducted.

10:10AM

21 **Q** Did you gather up any news stories to try to
22 understand what the citizens of Oklahoma were being
23 told about the Oklahoma river and Tenkiller Lake?

24 **A** I did not personally do that, but I believe
25 news stories were gathered, yes.

10:10AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Q Were they gathered under your direction?

2 A I participated in the gathering process.

3 Q Who else participated in the gathering
4 process?

5 A Sorry, I don't remember. 10:10AM

6 Q So you yourself gathered some of these news
7 stories?

8 A I looked at news stories online, yes.

9 Q Did you share those news stories with the
10 other members of the team? 10:11AM

11 A I may have sent links to some of them to David
12 Chapman.

13 Q Who is David Fan?

14 A He's a professor at the University of
15 Minnesota. 10:11AM

16 Q And he's developed a program he calls
17 InfoTrend. What's InfoTrend?

18 A I don't know that name for sure, but obviously
19 in this E-mail it's mentioned. This may be one of
20 his software packages that he has developed for 10:11AM
21 doing media content analysis.

22 Q Is there a formal definition of media content
23 analysis that you use in your area?

24 A Yes.

25 Q Can you tell me what that is? 10:11AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**44**

1 **A** Sure. So conducting a media content analysis
2 involves drawing a systematic sample of news media
3 stories on some topic and analyzing the content of
4 those stories quantitatively.

5 **Q** How do you analyze the content of the stories 10:12AM
6 quantitatively?

7 **A** Well, the most common way in the past has been
8 to have people read the stories or transcripts of
9 the stories if they were broadcast and follow a set
10 of written instructions that tell them about a 10:12AM
11 series of decisions to make about each story, and
12 they record their decisions on paper or
13 electronically, and then statistics are computed
14 using that record of their decisions.

15 **Q** Now, this E-mail indicates that the attorneys 10:13AM
16 approved us moving forward on the media content
17 analysis effort.

18 **A** Yes.

19 **Q** And you indicated earlier that you did not do
20 a media content analysis? 10:13AM

21 **A** Correct.

22 **Q** Why not?

23 **A** My recollection is that we gathered up news
24 stories on the topic and looked them over and
25 determined that there were so few of them that there 10:13AM

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JON KROSNICK, PhD, 5-1-09

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1 was no merit to conducting a formal analysis. One
2 would need enough data to actually require
3 summarizing the content statistically, and we
4 concluded there was not enough.

5 Q I believe we need a tape change. So let's 10:13AM
6 take a break to change the tape.

7 VIDEOGRAPHER: We are off the Record. The
8 time is 10:13 a.m.

9 (Following a short recess at 10:13
10 a.m., proceedings continued on the Record at 10:25
11 a.m.)

12 VIDEOGRAPHER: We are back on the Record.
13 The time is 10:25 a.m.

14 Q Dr. Krosnick, we just took a twelve-minute
15 break; is that correct? 10:25AM

16 A That's correct.

17 Q What did you do during that break?

18 A Talked to David Page and Ingrid Moll and went
19 to the men's room.

20 Q What did you talk to David Page and Ingrid 10:25AM
21 Moll about?

22 A I asked them how is it going.

23 Q What did they tell you?

24 A They said going very well, you're a good
25 witness. 10:26AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**46**

1 **Q** You are indicated that following the break you
2 wanted to correct some things that you had said this
3 morning?

4 **A** Yes.

5 **Q** Go ahead. 10:26AM

6 **A** So you had asked me who was present at
7 presentation that I made on contingent valuation to
8 a group, including folks from the Attorney General's
9 Office and the State, and I think I omitted to
10 mention that David Page was also present at that 10:26AM
11 meeting, and I think I got my years off in telling
12 you about my involvement in the project. When I was
13 talking about late 2007, I should have said late
14 2006, and when I told you about early 2008, I meant
15 early 2007. 10:26AM

16 **Q** Okay. So the presentation that you believe
17 you made in Oklahoma was made in late 2006?

18 **A** Thank you, yes.

19 **Q** Before the break, we were talking about this
20 media content analysis effort and you indicated that 10:27AM
21 you and other members of the team reviewed articles
22 in the media; correct?

23 **A** I can't speak for other members of the team.
24 I know I looked at some articles, yes.

25 **Q** Did you reach any conclusions based on your 10:27AM

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JON KROSNICK, PhD, 5-1-09

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1 review of those articles?

2 **A** Yes.

3 **Q** What were they?

4 **A** That at that time news media coverage of these
5 issues had been minor enough not to merit further
6 analysis.

10:27AM

7 **Q** Was there any effort on the part of the team
8 to influence how the media was reporting the
9 Illinois River and -- excuse me, Tenkiller Lake and
10 the Illinois River?

10:27AM

11 **A** No.

12 **Q** Are you aware of any efforts by anyone to try
13 to influence how the media was reporting this
14 matter?

15 **A** No -- sorry. Yeah, no.

10:28AM

16 **Q** We talked a little bit earlier about the
17 contingent valuation methodology. Can you tell me
18 in your expert opinion what the pros and cons of
19 using the contingent valuation methodology are?

20 **A** Okay.

10:28AM

21 MS. MOLL: Objection to form.

22 **A** So pros and cons always depend upon a purpose,
23 and so I will assume for the moment that the purpose
24 is to assess total value of public goods, and the
25 pros are that this is an established defensible

10:28AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 methodology with scientific integrity that has been
2 shown repeatedly to produce valid measurements and
3 that has been used widely throughout the social
4 sciences and by government agencies and in many
5 countries around the world for assessing economic 10:29AM
6 value. The cons are principally that the method is
7 expensive to do optimally, that it's costly to
8 conduct a face-to-face survey, and the design work
9 is -- it's important that the design work be done
10 carefully to meet the goals of the project, and when 10:29AM
11 this work is being done for litigation, the
12 standards of excellence are quite high, and that
13 means a great deal of effort must go into the
14 project because each survey builds on prior
15 contingent valuation work but is also typically new 10:29AM
16 in important ways, and so it's not simply copy and
17 paste old surveys, and there's a fair amount of work
18 to be done designing each new one.

19 Q Any other cons that you can think of?

20 A Those are the principal ones. 10:30AM

21 Q You indicated that you have reviewed the
22 literature concerning contingent valuation
23 methodology; is that right?

24 A I have read literature in that area, yes.

25 Q Can you tell me what criticism there is in the 10:30AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**49**

1 literature regarding the contingent valuation
2 methodology?

3 **A** Yes. So there are a series of criticisms that
4 have been posed in the literature with regard to

5 this method. One criticism is what's called the 10:30AM

6 hypothetical bias, and the concern expressed by some

7 observers here is that when respondents are asked to

8 answer a question that is used to reveal economic

9 value, that may yield different results than

10 observing that value in non-verbal behavior 10:31AM

11 expressed through transactions. So that's the first
12 one.

13 A second concern about contingent valuation --

14 **Q** Let me just interrupt you for a moment.

15 **A** Okay. 10:31AM

16 **Q** What is your definition of hypothetical bias;
17 is it what you just stated to me?

18 **A** I guess what I've summarized for you is what I
19 believe is a consensual definition of that term as

20 used in the contingent valuation area, and I'm 10:31AM

21 comfortable using that definition.

22 **Q** Okay. Go ahead. I'm sorry I interrupted you.

23 **A** Okay. Sorry. What am I going ahead with?

24 **Q** You were talking about the literatures -- your

25 review of the literature and what criticisms are 10:31AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 contained in the literature about the CV
2 methodology.

3 **A** Okay. So a second criticism that has been
4 expressed by some is a concern called warm glow in
5 some circles, and this refers to the notion that 10:32AM
6 when respondents are asked in a CV survey to vote on
7 a referendum that would cost them money, for
8 example, that giving away money creates for them
9 this feeling referred to as warm glow, which is
10 thought of as a positive state, that giving away 10:32AM
11 money is rewarding, and that that may induce people
12 to appear to express value for a good when the value
13 is actually for the transaction itself, for giving
14 up the money.

15 **Q** In the case of warm glow, the people would be 10:32AM
16 receiving value for a good; the good that they're
17 buying is the warm feeling they get for giving away
18 money; right?

19 MS. MOLL: Objection to form.

20 **A** That's not my belief. 10:33AM

21 **Q** Okay. Go ahead.

22 **A** With what?

23 **Q** You were still talking about the literature's
24 criticisms of the contingent valuation methodology.

25 **A** Thank you. So a third concern in the 10:33AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**51**

1 literature is what's called insensitivity to scope,
2 and the concern here is that some respondents in
3 some studies may provide answers to contingent
4 valuation questions but that those answers do not
5 reflect the attributes of the good that they are 10:33AM
6 asked to buy.

7 **Q** Anything else?

8 **A** Okay. Another concern expressed about
9 contingent valuation studies has been insensitivity
10 to price. So here the idea is if a contingent 10:34AM
11 valuation study uses a referendum format and asks
12 respondents to express value for a particular public
13 good, let's say, at a stated price, that changing
14 that price should, according to economic theory,
15 change answers to the valuation question, and 10:34AM
16 concern has been expressed about whether those
17 changes in price do, in fact, yield changes in
18 valuation.

19 **Q** Any other criticisms?

20 **A** Yes. Another criticism in the literature 10:34AM
21 involves concern about payment mechanisms. So if a
22 contingent valuation survey is done using, say, a
23 referendum format, that's one in which if the good
24 is provided, then all payers pay a set price
25 typically and all payers receive the good, and one 10:35AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**52**

1 of many alternative payment mechanisms is voluntary
2 contributions, and those measurements yield
3 different results in some cases from referendum
4 measurements, and concern has been expressed about
5 the validity of contingent valuation because those
6 measurement methods yield different results.

10:35AM

7 **Q** Anything else?

8 **A** Another concern that has been expressed is
9 what's referred to as adding up, and adding up is
10 related to the scope issue that some observers have
11 said that willingness to pay to prevent the deaths
12 of 200 birds should be worth 10 times as much as
13 willingness to pay to prevent the deaths of 20
14 birds, and some scholars have expressed concern that
15 the contingent valuation method does not yield that
16 ratio of observed willingness to pay in situations
17 like that.

10:36AM

18 **Q** And you refer to that as --

19 **A** Adding up.

20 **Q** Adding up, okay. Anything else?

10:36AM

21 **A** Another concern in this literature has been
22 that question wording can alter willingness to pay.
23 So, for example, if respondents are given some
24 information before they vote on a referendum in a CV
25 study, that that information has been shown to alter

10:37AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**53**

1 the answers that they give in some cases, and some
2 scholars have expressed concern that that indicates
3 lack of validity in answers.

4 Q Can the wording of the problem affect the
5 results of the willingness to pay? 10:37AM

6 A Can you restate that?

7 Q Yeah. In a contingent valuation survey, my
8 understanding is that part of the survey is
9 describing the problem or the injury.

10 A Okay. 10:37AM

11 Q Can the wording of that injury affect the
12 willingness to pay?

13 A So can the wording used to describe the injury
14 alter the answers that people give to the survey?

15 Q Correct. 10:38AM

16 A Yes.

17 Q Can the wording of the proposed solution
18 offer -- alter the answers that the respondents
19 provide to the survey?

20 A Yes. 10:38AM

21 Q I interrupted you again. You were going
22 through the literature's criticism of the contingent
23 valuation method. Any other criticisms from the
24 literature?

25 A One other concern that has been expressed is 10:38AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**54**

1 that the bid amounts offered in referendum questions
2 can bias answers.

3 Q In those criticisms, how -- well, explain to
4 me how those critiques believe that the bid amounts
5 can bias answers. 10:39AM

6 A Well, there's really only one line of research
7 that I know on this, and in that line of research
8 the dependent -- sorry. The question used to assess
9 value was not a referendum question format. So it
10 was -- it is a sequence of two questions that asks 10:39AM
11 is the amount that you're willing to pay for this
12 higher than or lower than some dollar amount and
13 then a follow-up question says -- asks what is the
14 most that you would be willing to pay for this good,
15 and the research study I know about altered the 10:40AM
16 dollar amount used in the first question and then
17 looked at how that affected answers to the second
18 question.

19 Q Okay. Any other criticisms of the contingent
20 valuation methodology that you're aware of? 10:40AM

21 A Not that I can recall.

22 Q Have you heard the term yea saying?

23 A Yes, I have.

24 Q What's your understanding of what yea saying
25 is? 10:41AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **Q** Do you agree that hypothetical bias can be an
2 issue in contingent valuation surveys?

3 **A** I believe hypothetical bias is not an issue
4 with contingent valuation surveys.

5 **Q** Why do you believe that? 10:43AM

6 **A** There is a large number of studies in the
7 literature exploring this issue, some of them
8 claiming to conclude that hypothetical bias is
9 present in contingent valuation-style measurements,
10 and the question then is do these studies actually 10:43AM
11 document what the authors claim that they document,
12 and in order for such documentation to be applicable
13 and informative, the study needs to describe to
14 respondents a good and make a CV-style measurement
15 of willingness to pay a value of that good, and then 10:44AM
16 in a completely comparable way offer an opportunity
17 to reveal value in a non-stated preference
18 behavioral way, such as by paying money to obtain
19 the good, and compare those measurements to one
20 another, and it's essential that the good in both 10:44AM
21 cases be exactly the same good; otherwise, you can't
22 compare the results of the two studies.

23 So one mistake that many studies have made is
24 to assess value, let's say, for a particular hunting
25 permit that I described to you in detail and then to 10:44AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 assess willingness to pay for a different hunting
2 permit from a different group of people at a
3 different time in a different setting and so say,
4 well, look, they're different. Not informative
5 because there's no reason why your willingness to
6 pay for a Mazda today should be the same as your
7 willingness to pay for a Volkswagen 20 years from
8 now or someone else's willingness to pay for a
9 Volkswagen 20 years from now.

10:45AM

10 So the one set of design flaws in these
11 comparisons or at least aspects of the design that
12 undermine their informativeness for this issue is
13 non-comparability. That unfortunately knocks out
14 the vast majority of studies in this area. One
15 important aspect of the non-comparability is that,
16 as you can imagine, a contingent valuation study can
17 be done well or it can be done with shortcuts in the
18 methodology. It can be done with face-to-face
19 interviewing versus with other methods of data
20 collection. It can be done after extensive
21 pretesting or after no pretesting. It can be done
22 with a questionnaire that respondents easily
23 understand and a questionnaire that is very
24 difficult for respondents to understand in a setting
25 where they have little motivation to be thoughtful,

10:45AM

10:45AM

10:46AM

10:46AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 and in those cases when contingent valuation has
2 been compared to other methods of observing economic
3 value in these hypothetical bias studies, in many of
4 those cases the contingent valuation surveys did not
5 use the methods that were used in the highest
6 quality contingent valuation surveys and where we
7 have good reason to believe they compromised the
8 accuracy of the CV measurements and, again, it's
9 not informative to say a badly done contingent
10 valuation study produces a number different from
11 some other measurement method and to then conclude
12 from that the contingent valuation in general
13 suffers from that problem.

10:46AM

10:46AM

14 Most importantly, when one focuses on the
15 contingent valuation method that our team used in
16 this Oklahoma case, we focused on the referendum
17 format for measuring willingness to pay, and we
18 conducted an extensive analysis to assess the
19 validity of stated votes on referenda with actual
20 votes on referenda in real elections, and to do so,
21 we gathered up hundreds of instances in which
22 preelection surveys had asked respondents to say how
23 they would vote on a referendum, and the results of
24 those surveys were then compared to actual voting on
25 those referenda, and I think about 27 states over a

10:47AM

10:47AM

10:47AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**59**

1 period of about 10 years, a little bit more, closer
2 to 15 perhaps, and what we found is that when the
3 referendum is described in the survey very
4 comparably to the way it will be described in the
5 voting booth to voters and when the survey is
6 conducted within seven days of the election and when
7 the survey sample is comparable to the population
8 gathered through scientific sampling methods, that
9 the correspondence of those surveys to actual voting
10 is extremely close or is within a couple of
11 percentage points on average. So that's an
12 important basis for my confidence that surveys
13 asking people to vote in the survey context
14 correspond very, very closely to their behavior
15 voting on referenda in real elections.

10:48AM

10:48AM

10:48AM

16 **Q** This study that you did on referenda, you did
17 that as part of your work in connection with this
18 matter?

19 **A** Yes, I did.

20 **Q** Were you paid for that work by the State of
21 Oklahoma or Stratus?

10:48AM

22 **A** Yes.

23 **Q** Okay.

24 **A** Well, sorry. No. The answer is no.

25 **Q** Were you paid by Motley Rice?

10:49AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** Correct.

2 **Q** Is that an article that you intend to publish?

3 **A** Yes.

4 **Q** When is that going to be published?

5 **A** I don't know. 10:49AM

6 **Q** How much were you paid for your work on this
7 study about referenda?

8 **A** I don't know.

9 **Q** That was just part of your general bills to
10 Motley Rice? 10:49AM

11 **A** Correct.

12 **Q** Okay, and was this study of referenda your
13 attempt to establish that these hypothetical bias
14 criticisms are invalid?

15 **A** No. 10:49AM

16 **Q** Okay. How would you design a study to test
17 whether or not hypothetical bias occurred in
18 contingent valuation surveys?

19 **A** Well, I just described to you one study that
20 we did looking at referenda, and I believe that's 10:50AM
21 informative of the accuracy of hypothetical bias in
22 contingent valuation surveys.

23 **Q** Okay. So you believe your study on referenda
24 is informative of hypothetical bias in contingent
25 valuation studies? 10:50AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** And the answer is Texas.

2 **Q** What was Mr. Silver's involvement in this
3 matter?

4 **A** I asked him to collect the data for this and
5 to do the statistical analysis of the data, which he 10:51AM
6 did.

7 **Q** Anything else?

8 **A** No.

9 **Q** Okay. Let's talk about warm glow. You
10 indicated some of the literature suggests that warm 10:51AM
11 glow can be a problem in contingent valuation
12 surveys.

13 **A** I didn't say that.

14 **Q** Okay. Let's just talk about warm glow. When
15 a referendum involves a social issue such as 10:52AM
16 protecting the environment, can warm glow be an
17 issue in your opinion?

18 **A** No.

19 **Q** Why not?

20 **A** I have seen no evidence that warm glow exists 10:52AM
21 in contingent valuation surveys, and I find the idea
22 theoretically implausible.

23 **Q** Why do you find the idea theoretically
24 implausible?

25 **A** Well, at its core the criticism requires that 10:52AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**63**

1 we take joy in giving away money, and we've studied
2 the process by which people decide about giving away
3 money for many years, and it does not appear that
4 there's any joy at all for most people in giving
5 away money, simply giving away money, that the idea
6 is that that -- that giving away that money might be
7 pleasurable if the end state of the world for that
8 individual or someone else after the money is gone
9 is somehow better than if the money is there. So,
10 in other words, the idea here is that if someone
11 were to pick your pocket and take your money from
12 your wallet and you didn't know what happened to it
13 other than that that person got it, that's giving up
14 money, and if giving away money was somehow a cause
15 of a warm glow of happiness, we would expect to see
16 that there. I've never seen anyone either say that
17 they themselves or anyone else was pleased to have
18 had money taken away from them. So the idea strikes
19 me as theoretically implausible. It's not one that
20 has been endorsed by psychologists who study
21 reasoning processes. It's one that's been proposed
22 by economists who do not study psychology, and so I
23 don't -- I don't find it plausible.

10:52AM

10:53AM

10:53AM

10:53AM

24 **Q** In your referenda in this CV study, the money
25 was -- wasn't real money, it was only hypothetical

10:53AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**64**

1 money; correct?

2 **A** No, I don't agree with that.

3 **Q** Well, the respondents weren't required to pay
4 the \$400 bid amount or the \$405 bid amount; right?

5 **A** Well, we described to the respondents in our 10:54AM
6 survey a referendum for them to vote on, and I
7 believe the respondents understood that voting for
8 the referendum meant that they were willing to pay
9 \$405 if the State implemented the plan as described
10 in the survey. 10:54AM

11 **Q** Do you believe that insensitivity to scope can
12 be a problem with contingent valuation surveys?

13 **A** No, I don't.

14 **Q** Why not?

15 **A** First, because many studies, dozens and 10:54AM
16 probably hundreds, actually have shown sensitivity
17 to scope in well-designed contingent valuation
18 surveys. Literature review was published on this by
19 Richard Carson, cataloging all of those many studies
20 at the time the paper was published, and that's just 10:55AM
21 a lot of evidence that respondents do in fact
22 respond to scope changes and contingent valuation
23 surveys in ways that would be expected based upon
24 economic theory. Secondly, studies that have
25 claimed to find no scope effects when those data 10:55AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 have been reanalyzed properly, we have found that
2 there were indeed even scope effects in those
3 studies that the investigators failed to recognize
4 and, thirdly, in every contingent valuation study I
5 have conducted that included a scope manipulation,
6 we have seen effects of that scope manipulation on
7 answers in ways expected by economic theory.

10:55AM

8 Q Can sensitivity to scope be an issue in
9 surveys that are not well designed?

10 A I think what you're asking is if a survey
11 study, a contingent valuation survey study is not
12 optimally designed, can that lead to a failure to
13 observe a scope effect, and I think the answer to
14 that is yes.

10:56AM

15 Q In the case of this survey, you told
16 respondents that they would have a tax added to
17 their income tax; correct?

10:56AM

18 A No, not exactly.

19 Q Okay. What did you tell respondents about how
20 they were going to be asked to pay for the solution?

10:57AM

21 A So we said -- well, if you don't mind, can I
22 just read the report?

23 Q You may.

24 A Thank you.

25 Q I've handed you what's previously been marked

10:57AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 as Chapman Deposition Exhibit No. 10, which is a
2 copy of Volume I of the Stratus survey.

3 **A** Okay. I can read a little bit.

4 **Q** What page are you on, please?

5 **A** I'm on Page A-19 of Volume II of our report. 10:58AM
6 That's actually Chapman Exhibit 11.

7 **Q** Okay. Go ahead.

8 **A** So we said to pay for this, Oklahoma taxpayers
9 would pay a one-time tax added to their state income
10 tax bill next year. 10:58AM

11 **Q** That's what you told the survey respondents
12 about how they would pay the tax?

13 **A** That's what the interviewers told them, yes.

14 **Q** Okay. Now, some of the respondents don't pay
15 Oklahoma state income tax; correct? 10:59AM

16 **A** I wouldn't agree with that.

17 **Q** Didn't you ask the respondents whether they
18 had paid Oklahoma state income tax?

19 **A** In 2007.

20 **Q** And some of the respondents had not paid 10:59AM
21 Oklahoma state income tax in 2007; correct?

22 **A** Yes.

23 **Q** And some of the respondents received a full
24 refund of any tax they had paid to the State of
25 Oklahoma in 2007; correct? 10:59AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** That's correct.

2 **Q** What percentage of the respondents paid no
3 income tax in 2007?

4 **A** I cannot answer that question with this
5 survey. 11:00AM

6 **Q** Okay. For those respondents who paid no
7 income tax to the State of Oklahoma and didn't
8 believe that they were going to pay income tax in
9 the future -- strike that. Let me try it again.
10 For those respondents who didn't pay income tax in 11:01AM
11 2007 and knew they weren't going to pay income tax
12 in the future, how did you assure that those
13 respondents had consequentiality in their decision?

14 **A** Can't accept the premise of your question.
15 I'm sorry. 11:01AM

16 **Q** Why can't you accept the premise of my
17 question?

18 **A** Because you said the respondents who knew they
19 would not pay Oklahoma taxes in the future, and I
20 don't know how anyone could know that wouldn't 11:01AM
21 happen.

22 **Q** You don't believe there are citizens in the
23 state of Oklahoma whose income is below the tax rate
24 in the state of Oklahoma who believe they are not
25 going to pay income tax in the future? 11:02AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**69**

1 information, and believed and still believe I did
2 not and do not need to know them in order to design
3 this survey well.

4 **Q** Okay. You'd agree with me that there may be
5 people in the state of Oklahoma who, for example,
6 are retired and have a pension amount that they
7 receive every year and don't anticipate ever paying
8 income tax?

11:03AM

9 **A** Sorry, say it one more time if you would.

10 MR. DEIHL: Just read it back to him.

11 (Whereupon, the court reporter read
12 back the previous question.)

13 **A** It is possible that there is such a person,
14 yes.

15 **Q** And that wasn't important to you in analyzing
16 these results?

11:03AM

17 **A** You know what? It might be good to just not
18 putting the speaker on.

19 **Q** Do you remember the question?

20 **A** Sorry, no.

11:04AM

21 (Whereupon, the court reporter read
22 back the previous question.)

23 **A** I'm sorry, what wasn't important to me?

24 (Whereupon, the court reporter read
25 back the previous questions and answer at Page 69,

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JON KROSNICK, PhD, 5-1-09

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1 4-16.)

2 **A** The fact that there may be such a person was
3 not relevant to me analyzing these results, that's
4 correct.

5 **Q** And why wasn't it relevant to you? 11:04AM

6 **A** I don't know how to answer that. I'm sorry.

7 **Q** Doesn't it matter for purposes of survey
8 design that the respondent actually believes that he
9 is going to pay the bid amount?

10 MS. MOLL: Objection to form. 11:05AM

11 **A** In a contingent valuation survey such as this,
12 we describe to respondents an opportunity when they
13 can vote in favor of or against a referendum, and
14 that referendum implies that if the State undertakes
15 a particular action, that the State will provide a 11:05AM
16 result, in this case a change in the environment, in
17 exchange for a charge made to the respondents' state
18 income tax bill the next year, and we describe this
19 in a way that respondents, we believe, accept that
20 assertion, that if they vote for the referendum, 11:05AM
21 that that payment amount would be added to their
22 next year's state income tax bill.

23 **Q** And if the respondents don't believe that
24 assertion, is that a problem in terms of obtaining
25 valid results? 11:06AM

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JON KROSNICK, PhD, 5-1-09

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1 **A** No.

2 **Q** Why not?

3 **A** Well, we recognize that when we in a
4 contingent valuation survey describe a scenario to
5 respondents, as we have here, not everyone accepts 11:06AM
6 every aspect of the scenario as we describe it, just
7 as when advertising claims that this is the best
8 aspirin out there, not everyone accepts that
9 assertion as well, and so what's important in
10 understanding the revealed willingness to pay that a 11:06AM
11 contingent valuation survey produces is to provide
12 the information and to measure people's
13 interpretation of the information and their beliefs
14 and to look at the impact of those beliefs on their
15 judgments. 11:06AM

16 **Q** What percentage of respondents need to accept
17 your scenario in order for the results of your
18 survey to be accurate?

19 **A** There is no answer for that question. There
20 is no percentage that must do so. 11:07AM

21 **Q** Do you have an opinion about what percent of
22 respondents need to accept your scenario in order
23 for your survey to be -- to result in accurate
24 results?

25 **A** That is my opinion. I just stated it. There 11:07AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**72**

1 is no number.

2 **Q** So if none of the respondents believed your
3 scenario, you think you could still have an accurate
4 willingness to pay number?

5 **A** Yes, I do. 11:08AM

6 **Q** And why do you believe that?

7 **A** When you said if none of them believed the
8 scenario, I interpreted that in the following way:
9 That there are a series of assertions in the
10 scenario used in this case's contingent valuation 11:08AM

11 study, for example, and others as well, and one
12 could imagine asking a series of questions, as we
13 did in this study, about people's beliefs on many of
14 the most important assertions in the survey, to ask
15 whether the respondent believed what the scenario 11:08AM

16 told them or whether they held a different belief,
17 and it's possible that no respondent in the survey
18 accepted all of the assertions at face value, and
19 that's how I interpreted your question to mean, but
20 as long as some of the respondents accepted all of 11:09AM

21 the assertions, each of the assertions, it's
22 possible to do the statistical analysis, based on
23 measurements that we carried out, to assess the
24 impact of the departures of people's beliefs from
25 the statements made in the scenario on the observed 11:09AM

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JON KROSNICK, PhD, 5-1-09**73**

1 willingness to pay, and proper scientific procedures
2 can then be carried out to assess the impact of
3 those departures of beliefs and to calculate
4 willingness to pay accurately in the face of those
5 departures.

11:09AM

6 **Q** What if none of the respondents believed they
7 were going to have to pay the bid amount?

8 MS. MOLL: Objection to form.

9 **A** Sorry, it's too vague. If you don't mind --

10 **Q** We were talking a little bit earlier about the
11 possibility that a respondent might not believe that
12 that respondent actually had to pay the bid amount.

11:10AM

13 What happens if none of the respondents believed
14 that they had to pay the bid amount; would that

15 affect the validity of the willingness to pay number
16 that you arrive at in your survey?

11:10AM

17 **A** I already tried to correct us on this earlier.
18 It's not -- as stated, it's not a meaningful
19 question I can answer.

20 **Q** Why can't you answer that question?

11:10AM

21 **A** I don't even -- I'm not understanding what you
22 mean.

23 **Q** Well, you told me earlier that it's possible
24 that there's a citizen in the state of Oklahoma who
25 didn't believe that he or she was going to have to

11:10AM

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JON KROSNICK, PhD, 5-1-09**74**

1 pay the bid amount that you represented to them they
2 were going to have to pay.

3 **A** No, I did not say that.

4 **Q** Okay. Do you believe that there could be a
5 respondent who didn't believe that he or she was 11:11AM
6 going to have to pay the bid amount?

7 **A** So I'll state again my earlier answer. So the
8 survey is designed to describe a scenario in which
9 respondents are told about a referendum to vote on,
10 and we described to them that if they vote yes, 11:11AM
11 that's an indication that they favor the State
12 implementing a particular plan, and if that plan
13 were implemented, a particular change in
14 environmental conditions would result and that a
15 particular dollar amount would be added to their 11:11AM
16 state income tax bill with the next year, in the
17 next year. So that's what we described to the
18 respondents, and I believe the respondents believed
19 that.

20 **Q** My question was, what if the respondents 11:12AM
21 didn't believe that?

22 **A** And this is where I get confused because
23 you're saying what if they didn't believe which part
24 of that, if you wouldn't mind stating it?

25 **Q** What if they didn't believe that the bid 11:12AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 amount was going to be added to their state income
2 tax bill for the following year?

3 **A** Well, we never said that.

4 **Q** Why don't you read again what you told the
5 respondents?

11:12AM

6 **A** Well, to correct the misstatement you just
7 made, I can read a lot, but we didn't say this bid
8 amount will be added to your state income tax bill.
9 We said if this -- you are voting on a proposal
10 whereby if you vote in favor of it, you support
11 implementation of the plan and the addition of this
12 amount to your state income tax bill.

11:12AM

13 **Q** Why don't you read again the language from the
14 survey?

15 **A** The State does not want to start the program
16 unless it has all the funds needed to buy the
17 equipment, hire and train the staff and complete the
18 five years of alum treatments. To pay for this,
19 Oklahoma taxpayers would pay a one-time tax added to
20 their state income tax bill next year.

11:12AM

11:13AM

21 **Q** What if the respondents didn't believe that a
22 one-time tax would be added to their state income
23 tax bill the following year?

24 **A** Here's where I'm getting stuck on your
25 question. When you say would, that's a conditional

11:13AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 verb, and so if you can just tell me would,
2 conditional on what?

3 Q What if the respondents didn't believe the
4 statement you just read me?

5 MS. MOLL: Objection to form. 11:13AM

6 A Yeah, I apologize. I don't -- this is an
7 assertion being made by the interviewer to the
8 respondent saying this is the proposal that you're
9 voting on, so there isn't something to believe or
10 not believe. This is the proposal. 11:14AM

11 Q So it doesn't matter whether the respondents
12 believe or not believe the statement you just read
13 to me?

14 A They -- there's a description of the scenario
15 here whereby this proposal would be carried out. So 11:14AM
16 I don't -- I'm not understanding what you mean by
17 not believe it here. This is an assertion.

18 Q Did the respondents have to accept that
19 assertion in order for your survey to be valid?

20 A No. 11:14AM

21 Q So if the respondents -- can you read again
22 the sentence you read me earlier? What page are you
23 on, please?

24 A This is Page A-19. If you don't mind, let's
25 put the thing in context. So we're interviewing 11:15AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**77**

1 people in Oklahoma to ask them to vote on whether
2 the State should or should not put alum on the land
3 and in the water. Your vote today will affect
4 whether or not alum treatments are done. The State
5 does not want to start the program unless it has all
6 the funds needed to buy the equipment, hire and
7 train the staff and complete the five years of alum
8 treatments. To pay for this, Oklahoma taxpayers
9 would pay a one-time tax added to their state income
10 tax bill. The cost to your household would be a
11 particular dollar amount, and so on.

11:15AM

11:15AM

12 **Q** Now, in that sentence you just read, you used
13 the word would. What did you mean by the word would
14 in that sentence?

15 **A** What I meant by the word would -- what I
16 meant, what this -- I don't know that I meant
17 anything. I'm reading words here.

11:15AM

18 **Q** You helped design this -- this questionnaire;
19 right?

20 **A** Absolutely.

11:16AM

21 **Q** Okay. So what did you and the team mean by
22 the word would?

23 **A** Is it okay if I tell you what I think the
24 respondents interpret the word to mean?

25 **Q** No. I want to know what you meant by it.

11:16AM

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JON KROSNICK, PhD, 5-1-09

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1 **A** I don't want to read other members minds on
2 the team and I don't want you to tell me what I
3 meant by it. I'll tell you how I interpret this
4 statement. Okay. My interpretation of this
5 statement is a description of a proposal to the
6 respondent that we asked them to consider, and the
7 would means if the State implements this scenario,
8 this is what would occur. These are the actions
9 that would be observed.

11:16AM

10 **Q** Was it important to the validity of the survey
11 that the respondents believed that they would have
12 to pay a one-time tax added to their state income
13 tax bill?

11:16AM

14 **A** If what?

15 **Q** Not if anything.

11:17AM

16 **A** I just described it to you as if. That's the
17 only way I can interpret this statement. So in
18 other words, the word would is conditional on the
19 implementation of the plan.

20 **Q** So you can't --

11:17AM

21 MR. DEIHL: Can you read back the last
22 question, please?

23 (Whereupon, the court reporter read
24 back the previous questions and answers at Page 78,
25 Lines 10-19.)

11:18AM

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JON KROSNICK, PhD, 5-1-09

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1 to my tax bill. Is that what you're asking, that
2 scenario?

3 Q Yes.

4 A Great. Progress. Okay. So I think you're
5 asking me if that happens, if somebody says I think 11:20AM
6 this plan could be implemented but not -- I would
7 not be charged for it, what would the effect of that
8 be on the validity of the survey?

9 Q Yes.

10 A Okay. The answer is none. 11:20AM

11 Q If every respondent believed that, it would
12 have no impact on the validity of the survey?

13 A That's correct.

14 Q Why not?

15 A Because I think, based on my professional 11:20AM
16 experience, that the statement in this questionnaire
17 that this is what they're voting on makes it clear
18 that if they think they can get this -- if the plan
19 were implemented without that tax being added to
20 their tax bill, if that could occur, that's 11:21AM

21 irrelevant to the survey. What the survey is asking
22 is if the tax were added to your bill and that is
23 the way that this good were produced, would you vote
24 in favor of that or against that, and so I don't
25 think that belief is relevant. 11:21AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**81**

1 Q Okay. Why don't we take time for the tape
2 change.

3 VIDEOGRAPHER: We are off the Record. The
4 time is 11:22 a.m.

5 (Following a short recess at 11:22
6 a.m., proceedings continued on the Record at 11:31
7 a.m.)

8 VIDEOGRAPHER: We are back on the Record.
9 The time is 11:31 a.m.

10 Q Dr. Krosnick, I've handed you what's been 11:31AM
11 marked for purposes of identification as Deposition
12 Exhibit No. 4, which is an E-mail dated February
13 8th, 2007 from David Chapman to you, and it's a
14 series of E-mails; correct?

15 A Yes, I see that. 11:31AM

16 Q If you take a look at the second page of this
17 exhibit, at the bottom is an E-mail from Fred Baker
18 at Motley Rice to you; do you see that?

19 A Yes, I do.

20 Q And it's dated February 5th, 2007? 11:32AM

21 A I see that.

22 Q And in this E-mail Fred Baker wrote, Jon, I
23 think the hourly billing will work better for us
24 than a retainer. Accordingly, I have drawn up a
25 draft contract for your review using the \$675 11:32AM

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JON KROSNICK, PhD, 5-1-09

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1 hourly. Please give the draft a look over and let
2 me know if there is anything we need to discuss
3 further. Did I read that correctly?

4 **A** Yes, you did.

5 **Q** Was 675 your rate for this matter? 11:32AM

6 **A** Yes. Time and a half for deposition and
7 testimony.

8 **Q** Has that hourly amount gone up since 2007?

9 **A** Not on this project.

10 **Q** What is your hourly rate today on other 11:33AM
11 projects?

12 **A** For projects that start new, it's a thousand
13 dollars an hour.

14 **Q** How much have you been paid to date in
15 connection with this project? 11:33AM

16 **A** I don't know.

17 **Q** Was there a discussion between you and the
18 Motley Rice firm about a retainer as opposed to an
19 hourly rate?

20 **A** Yes. 11:33AM

21 **Q** Now, this E-mail is dated February 5th, 2007.
22 Had you already been working on the project before
23 this date?

24 **A** I believe that before this date was the trip
25 that I made to Oklahoma that I described earlier, 11:33AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**83**

1 and I assume that I was paid for that work. So I
2 guess you could say, technically speaking, my paid
3 work began before this date, yes.

4 Q If you'd look at the E-mail above this, it's
5 dated February 6th, 2007, and that's an E-mail from 11:34AM
6 you to Mr. Baker; right?

7 A Uh-huh.

8 Q And if you'd take a look at the second full
9 paragraph, it starts with so far I have been doing
10 whatever David asks me to do and when he asks me to 11:34AM
11 do it; do you see that?

12 A Yes, I do.

13 Q Was that an accurate statement?

14 A Yes.

15 Q Did you bill Stratus separately from billing 11:34AM
16 Motley Rice or did all your bills go to Motley Rice?

17 A For this project all bills went to Motley
18 Rice.

19 Q Now, take a look at the first page of Exhibit
20 4, please. In the middle of that page is an E-mail 11:35AM
21 from David Chapman to Fred Baker and you; do you see
22 that?

23 A Yes, I do.

24 Q It's dated February 8th at 12:11 p.m.?

25 A Yes, I do. 11:35AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**84**

1 **Q** In the text of that E-mail David Chapman
2 wrote, Jon and I had a chance to discuss this issue.
3 Right now Jon is working on both the survey design,
4 focus groups and content analysis. Do you see that?

5 **A** Yes, I do. 11:35AM

6 **Q** What was your understanding of the content
7 analysis that you were working on?

8 **A** That's the news media content analysis we
9 discussed earlier.

10 **Q** Okay. So it's not this content analysis that 11:35AM
11 you described to me earlier; there's a scientific
12 definition of what a content -- a media content
13 analysis is; correct?

14 **A** That's two questions. I'll answer them both.
15 It is what I described to you as a content analysis, 11:36AM
16 and it is what I described to you as the news media
17 content analysis project that you asked me about
18 earlier.

19 **Q** Okay, and so what were you doing in connection
20 with the content analysis at this point in time? 11:36AM

21 **A** As of February 8th, I think I was aware that
22 it was on the docket to be done, but I had not done
23 any active work other than discussing the
24 possibilities for it with David Chapman.

25 **Q** Okay. So you weren't working on the content 11:36AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 analysis in February?

2 **A** No. I think I -- I mean, in other words, if
3 you asked me what am I working on right now, I don't
4 interpret right now to mean this instant. I mean,
5 what am I in the midst of actively doing, and we 11:37AM
6 certainly -- David Chapman and I certainly had had
7 prior discussions of the content analysis project
8 and later discussions. So I would consider February
9 8th, 2007 as a point in the midst of the period when
10 I was devoting some time to working on that, yes. 11:37AM

11 **Q** Okay, and you were also working on survey
12 design; correct?

13 **A** Yes.

14 **Q** And you were working on focus groups?

15 **A** Yes. 11:37AM

16 **Q** What was your work in connection with focus
17 groups?

18 **A** I attended the focus groups. I advised on
19 what to do with the participants during the focus
20 groups. I interpreted the information gained from 11:37AM
21 the focus groups and made suggestions about changes
22 in the questionnaire and CV study design based upon
23 what occurred during the focus groups.

24 **Q** How many of the focus groups did you attend
25 approximately? 11:38AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 information was needed widely by participants. I
2 think that's it.

3 Q Okay. Dr. Krosnick, I've handed you what's
4 been marked as Deposition Exhibit No. 5, which is an
5 E-mail dated March 19, 2007 from David Chapman to 11:43AM
6 you, and below that is an earlier E-mail from you to
7 David Chapman. Do you have that in front of you?

8 A Yes, I do.

9 Q In the E-mail at the bottom of the page from
10 you to David Chapman, you in the second sentence 11:43AM
11 talk about work on the new questionnaire. Do you
12 see that?

13 A Yes, I do.

14 Q Did you revise the questionnaire as you went
15 through the focus group process? 11:43AM

16 A The group did, yes.

17 Q Okay. Who was involved in revising the
18 questionnaire?

19 A Everyone.

20 Q And how did you go about making decisions on 11:43AM
21 revisions to the questionnaire?

22 A For the most part people -- individuals
23 proposed changes to make to some or all of the team,
24 and if the people present at that meeting or in that
25 conversation endorsed it, then the change was made 11:44AM

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JON KROSNICK, PhD, 5-1-09**89**

1 to the draft, and the draft was circulated to the
2 team and especially to people who hadn't
3 participated in that discussion, to then get their
4 reactions and make sure everybody was comfortable
5 with the changes. So sometimes changes were made 11:44AM
6 within minutes of the completion of a focus group.
7 Sometimes changes were made later in meetings, not
8 at that time.

9 Q And this was sort of an iterative process that
10 you changed the questionnaire as you went through 11:44AM
11 these focus groups?

12 A Yes.

13 Q Would you then test the new questionnaire at
14 the following focus group and then discuss the
15 outcome of that focus group with the team? 11:44AM

16 A Yes. Between -- well, if you had two focus
17 groups essentially back to back in the same evening
18 separated by a half hour, we rarely made changes
19 during that time interval, but between an evening of
20 focus groups and another day, there was always time 11:45AM
21 to make those changes, and almost always routine
22 changes were made during those time intervals.

23 Q Okay, and would you and other members of the
24 team sit down together and discuss the changes that
25 were being made or would you provide your input to 11:45AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 somebody and the other team members would provide
2 their input to that same person; how did it work
3 kind of logistically?

4 **A** I think I described that a moment ago. So we
5 had discussions among groups of people when changes 11:45AM
6 were made. So somebody would propose changes to
7 other people who would then react to those changes,
8 and then the rest of the team would ultimately see
9 the changes that the smaller group endorsed to see
10 whether everyone else thought that they were wise 11:46AM
11 changes, and so there's no simple way to describe
12 who sat with whom on what occasions. In other
13 words, there wasn't a routine process.

14 **Q** It was kind of a consensus building process in
15 terms of changing the questionnaire? 11:46AM

16 **A** Yes.

17 **Q** Who physically made the changes to the
18 questionnaire?

19 **A** My guess is everybody did at some point or
20 another. 11:46AM

21 **Q** Okay. Was the questionnaire kept on an FTP
22 site or how did that work?

23 **A** It certainly was during some time period. I
24 don't know -- I'm not sure if you would you call it
25 an FTP site. We used -- well, I guess, yeah, we did 11:46AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**91**

1 have an FTP site, yeah. So it was on an FTP site
2 during some time periods. It was on a computer that
3 we all used via remote desktop on occasions, and it
4 was also E-mailed back and forth among us, and so
5 different versions of it sat on different people's
6 computers at different times.

11:47AM

7 **Q** How many iterations of the questionnaire did
8 you do; do you know?

9 **A** I wouldn't even know how to count an
10 iteration. In other words, does changing one word
11 count? When have you finished an iteration? I
12 wouldn't know.

11:47AM

13 **Q** Okay. Who drafted the initial questionnaire,
14 the first questionnaire?

15 **A** I'm not sure I know because I think it was
16 drafted before I was involved, but I believe that
17 Rich Bishop played an important role in that
18 process, along with Michael Hanemann and David
19 Chapman, but beyond that, I don't know who else
20 participated actively.

11:47AM

11:47AM

21 **Q** Dr. Krosnick, I've handed you what's been
22 marked as Deposition Exhibit No. 6, which is -- I'll
23 represent to you came out of your considered by
24 materials and was labeled notes dot doc. Do you
25 know what this document is?

11:48AM

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JON KROSNICK, PhD, 5-1-09

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1 **A** I don't.

2 **Q** You don't know how this got into your
3 considered by materials?

4 **A** No. I don't know what this is.

5 **Q** Okay. If you look in the middle of the page 11:49AM
6 on the first page, there is a line that reads
7 followup to FG2. Did you refer to Focus Group 2 as
8 FG2?

9 **A** I don't have any memory one way or another.

10 **Q** Did the team refer to Focus Group 2 as FG2? 11:49AM

11 **A** I don't remember that ever happening.

12 **Q** Focus Group 2 was conducted on March 15th,
13 2007, I'll represent to you. Does that jive with
14 your recollection?

15 **A** It jives with Page 3.3 here, so, yes. 11:49AM

16 **Q** At the top of this page someone wrote memos.
17 Do you see that?

18 **A** Yes.

19 **Q** And the first one listed is ethics, why some
20 white lies are necessary. 11:50AM

21 **A** Uh-huh.

22 **Q** Did you have any discussion about writing any
23 memo about that topic?

24 **A** I have no recollection of that, no.

25 **Q** Do you know if anyone wrote any memos about 11:50AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**93**

1 ethics, why some white lies are necessary?

2 **A** No.

3 **Q** Looking at this list of memos, do you know
4 whether anyone on the team wrote any of these memos?

5 **A** Well, I guess I'm not -- when you say any of 11:50AM
6 these memos, I don't know that these are memos, but
7 you're asking me I think if anyone has written memos
8 on these topics.

9 **Q** That is my question. Thank you.

10 **A** And I would say that our report talks about 11:50AM
11 documentation of the survey design and development
12 process, talks about facts and science checks, talks
13 about ethnological and instrument decisions. I'm
14 not sure what bounding means here. Certainly talks
15 about the bid design, and it may talk about 11:51AM
16 optimality criteria. I don't know what that is.

17 **Q** Take a look at the second page of these notes.
18 You'd agree with me that these -- going back to the
19 first page, you'll see that there's the label that I
20 showed you before, follow up to FG2. Do you see 11:52AM
21 that?

22 **A** Yes, I do.

23 **Q** Then below that is a label issues?

24 **A** Yes.

25 **Q** Now turning over to the second page, in the 11:52AM

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JON KROSNICK, PhD, 5-1-09

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1 middle of that page someone has written what's alum;
2 is it natural; where does it come from; how do we
3 know it's safe; do you see that?

4 **A** Yes, I do.

5 **Q** Was that a topic that came out of the focus 11:52AM
6 groups?

7 **A** I'm not sure what you mean by came out of. It
8 was a topic we discussed with people in the focus
9 groups.

10 **Q** Were there questions among the team about 11:52AM
11 whether the way you presented alum to the
12 respondents received the result that you wanted from
13 the respondents?

14 MS. MOLL: Objection to form.

15 **A** I'm sorry, can you restate that? 11:52AM

16 **Q** You talked to the respondents about alum;
17 correct?

18 **A** You mean the focus group participants?

19 **Q** Yes.

20 **A** Thank you.

21 **Q** You talked to the focus group participants
22 about alum; correct?

23 **A** We did.

24 **Q** Did you modify what you told the respondents
25 about alum through this iterative process that we 11:53AM

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JON KROSNICK, PhD, 5-1-09

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1 talked about?

2 **A** I believe if we look back at the
3 questionnaires used during the focus group, that the
4 text describing alum may have changed over time.

5 **Q** Was there a concern among the team that the 11:53AM
6 respondents weren't understanding how the alum
7 treatment worked?

8 **A** I wouldn't use your word concern. As I
9 described earlier, the purpose of the focus groups
10 was to assess how respondents interpreted the 11:53AM
11 information provided, and we provided information
12 about alum, and we wanted to assess how people
13 interpreted that information about the alum.

14 **Q** And when you assessed how people interpreted
15 the information about the alum, did you conclude 11:54AM
16 that they weren't interpreting it the way you
17 intended them to interpret it?

18 **A** I have no memory of that.

19 **Q** Did you have any involvement in drafting the
20 description of the proposed solution, i.e., the alum 11:54AM
21 treatment, in the final questionnaire?

22 **A** Yes.

23 **Q** What was your involvement in that?

24 **A** Same as I've described all along. So I
25 participated in the focus group, design and 11:54AM

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JON KROSNICK, PhD, 5-1-09

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1 observation of discussions of alum and the -- worked
2 with others in writing and revising the text in the
3 questionnaire on the alum.

4 Q How did the team select the alum treatment as
5 a proposed solution? 11:55AM

6 A I don't remember.

7 Q Did the team evaluate any other solutions
8 other than the alum treatment method?

9 A I think -- if we look back at the
10 questionnaire drafts used through the sequence, and 11:55AM
11 I don't know honestly how many of them exist, that
12 there may have been an alternative mechanism, but
13 I'm not remembering what it was before alum. I just
14 can't remember.

15 Q Okay. Dr. Chapman -- sorry. 11:56AM

16 A No problem. It's flattering.

17 Q I apologize. Dr. Krosnick, I've handed you
18 what's been marked as Deposition Exhibit No. 7,
19 which is an E-mail from Colleen Kenney to you and
20 others dated May 4, 2007. Do you have that in front 11:56AM
21 of you?

22 A Yes, I do.

23 Q In this E-mail -- first of all, who is Colleen
24 Kenney?

25 A Staff member at Stratus. 11:57AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**97**

1 **Q** In this E-mail Colleen writes, David and I
2 just got off the phone with the lawyers and they had
3 a lot of suggestions for the draft scenario. Do you
4 see that sentence?

5 **A** I do. 11:57AM

6 **Q** What's your understanding of what draft
7 scenario refers to?

8 **A** The draft questionnaire.

9 **Q** Were the lawyers involved in making
10 suggestions about the draft scenario? 11:57AM

11 **A** The lawyers looked at the questionnaires and
12 answered our questions to them about the
13 questionnaire drafts.

14 **Q** Did the lawyers make suggestions about the
15 draft scenarios? 11:57AM

16 **A** The lawyers answered our questions about the
17 questionnaire in two regards. One was that we asked
18 them whether the language in the questionnaire was
19 understandable to them because they're people just
20 like anyone else and we want to make sure the 11:58AM

21 language is understandable and clear and, secondly,
22 we wanted to make sure that we didn't ask any --
23 excuse me, we didn't state anything in the
24 questionnaire that was inconsistent with the purpose
25 and focus of the lawsuit for which it was done. 11:58AM

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JON KROSNICK, PhD, 5-1-09

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1 Q Were there occasions where the lawyers made
2 suggestions to the draft questionnaire that resulted
3 in changes to the questionnaire?

4 A Well, if you'll forgive me, the word
5 suggestions is Colleen's word in her E-mail, and I 11:58AM
6 think it's a little misleading. I wouldn't have
7 used that term. What the lawyers suggested to us
8 was issues to think about, not changes to the
9 questionnaire to make, and we certainly did listen
10 carefully to the observations the attorneys made in 11:58AM
11 both regards that I just described, and I believe we
12 did make changes to the questionnaire as a result of
13 what we learned from them.

14 Q Okay, and you were involving the lawyers for
15 the two reasons that you indicated earlier? 11:59AM

16 A Correct.

17 Q So in effect the lawyers served as another
18 sort of focus group for you?

19 A No.

20 Q Well, you talked to them to see if the 11:59AM
21 language was understandable to them?

22 A Yes, we did.

23 Q And the purpose of that was, just like in the
24 focus group, to see if the language was
25 understandable to the lawyers? 11:59AM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 scenarios to the lawyers, which lawyers did you
2 provide the draft scenario to?

3 **A** I didn't personally do it, so I didn't keep
4 track of that.

5 **Q** Who did it? 12:01PM

6 **A** I don't know.

7 **Q** Did you personally provide the draft scenario
8 to any of the lawyers at any time?

9 **A** No.

10 **Q** Dr. Krosnick, I've handed you what's been 12:01PM
11 marked as Deposition Exhibit No. 8, which is another
12 series of E-mails dated August 10, 2007. The top
13 one on the page is from David Chapman to you;
14 correct?

15 **A** Uh-huh, yeah. 12:01PM

16 **Q** In the E-mail in the middle of the page --

17 **A** Uh-huh.

18 **Q** -- from you to David Chapman you wrote, I
19 think we agreed that there are no survey issues we
20 need to worry about other than non-response. Do you 12:02PM
21 see that?

22 **A** I do.

23 **Q** What was the survey issue with non-response?

24 **A** I don't recall.

25 **Q** Was there any issue with non-response in 12:02PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 connection with the survey?

2 **A** I don't recall.

3 **Q** Do you recall what the response rate was for
4 the survey?

5 **A** We reported a series of different response 12:02PM
6 rates, but a weighted response rate is about 51
7 percent.

8 **Q** Did you believe that there was an issue
9 concerning the response rate?

10 **A** Well, as I said before, I don't know in 12:02PM
11 sentences like that what you mean by issue, but are
12 you asking about August 10th, 2007?

13 **Q** No. Now I'm asking you about the final survey
14 results.

15 **A** So if you'd mind, when you're asking about the 12:03PM
16 past tense, when are you asking me about?

17 **Q** Once you received the final results from the
18 survey, were you concerned about the response rate?

19 **A** No.

20 **Q** At this point in time in August of 2007, did 12:03PM
21 you have concerns about non-response?

22 **A** I'm always interested in non-response in any
23 survey I participate in, and I want to assure that
24 we take all the steps sensible to maximize the
25 response rate and minimize non-response. 12:03PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**103**

1 non-response?

2 **A** Yes. We certainly had discussions.

3 **Q** Tell me about that discussion.

4 **A** Well, you assumed there's one, and I've told

5 you there was many. We were talking about 12:05PM

6 non-response frequently during the course of the

7 project. So we had to think about it before the

8 data collection began because we had to make

9 decisions about how to design the data collection to

10 minimize non-response, and then we worked with the 12:05PM

11 interviewers during training to give them

12 information about how to minimize non-response. We

13 monitored the non-response rate throughout the

14 course of the data collection period. We calculated

15 the response rate at the end of the data collection 12:05PM

16 to indicate the magnitude of non-response that

17 occurred, and we did supplementary analyses

18 statistically to assess whether non-response bias

19 was present in the sample.

20 **Q** Why did you try to minimize non-response? 12:05PM

21 **A** The survey methods literature has now

22 accumulated evaluating the impact of response rates

23 on survey accuracy, and that is a literature that I

24 have contributed to and various others have

25 contributed to, and it's been a centerpiece of 12:06PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**104**

1 interest for the profession of survey research, and
2 what we have learned from many studies is that when
3 a scientific probability sample is drawn as we did
4 in this case and when substantial efforts are made
5 to interview as many of those people as possible as 12:06PM
6 was done in this case and response rates are
7 achieved in the range of 50 percent and higher, that
8 the accuracy of the results of the survey are
9 remarkably high, and that substantial effort and
10 time can be spent enhancing the response rate beyond 12:07PM
11 50 percent, and typically that yields very small
12 changes in the results of a survey, and so --
13 actually, I'm sorry, that was a long answer and I
14 forgot your question already.

15 Q I don't think you answered my question. My 12:07PM
16 question was, why did you try to minimize
17 non-response in the survey?

18 A Oh, yes. Thank you. Right. So what I just
19 described to you is if efforts are made to minimize
20 non-response as I just described, then that leads -- 12:07PM
21 the literature suggests that leads to an outcome of
22 a survey that's likely to be highly accurate, and
23 that's why we took those steps, so that we could
24 reach that destination.

25 Q Why were you trying to minimize non-response? 12:07PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** To maximize the accuracy of the survey.

2 **Q** So if the response rate is too low, the survey
3 may be inaccurate?

4 MS. MOLL: Objection to form.

5 **A** That's a meaningless question in our 12:08PM
6 literature. There is no such thing as too low.

7 **Q** If you have a single respondent answer, is
8 that enough?

9 **A** Enough for what.

10 **Q** To have a meaningful survey. 12:08PM

11 **A** I assume you are kidding. If the survey
12 sample is one person and you get the person, then
13 you've done it.

14 **Q** No. You told me that the response rate can
15 never be too low. 12:08PM

16 **A** I said to you we don't have standards whereby
17 we could say any response rate is too low. In other
18 words, response rates are a continuum ranging from
19 100 percent to zero percent. There is no line that
20 the profession can draw to say above this line it is 12:08PM
21 not too low and below this line it is too low.

22 **Q** Okay, and I take it different researchers have
23 opinions about where that line may be?

24 **A** As I just told you, there is no line.

25 **Q** Different researchers have opinions about 12:09PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 whether a specific non-response rate can affect the
2 accuracy of a survey?

3 **A** Is there a question?

4 **Q** Yes.

5 **A** What's the question? 12:09PM

6 **Q** Is that correct?

7 **A** I'm not here to testify about other people's
8 opinions. I'm only here to testify about my
9 opinions.

10 **Q** I'm asking you for your expertise based on 12:09PM
11 your review of the literature. If you don't have
12 that expertise, you can tell me, but based on your
13 review of the literature, is there a difference in
14 opinion about whether or not a given response rate
15 can affect the accuracy of a survey? 12:09PM

16 **A** No.

17 **Q** Is there literature about non-responsiveness
18 in surveys?

19 **A** I don't know what that term means.

20 **Q** In your E-mail, Deposition Exhibit 8, you 12:10PM
21 wrote, I think we agreed that there are no survey
22 issues we need to worry about other than
23 non-response. What did you mean by non-response?

24 **A** Well, I don't know what I meant in August
25 2007, but typically when I use the word 12:10PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**107**

1 non-response, I mean people from whom we wish to --
2 with whom we wish to complete an interview and from
3 whom we do not get data.

4 Q Okay. Based on your definition of
5 non-response, is there a level of non-response that 12:10PM
6 in your opinion you believe would result in an
7 inaccurate estimation of willingness to pay?

8 A No.

9 Q Dr. Krosnick, I've handed you what's been
10 marked as Deposition Exhibit No. 9. Do you have 12:11PM
11 that in front of you?

12 A Yes, I do.

13 Q And this is an E-mail from Richard Bishop to
14 you and others dated January 7, 2008; correct?

15 A Yes. 12:12PM

16 Q And in the E-mail Richard Bishop wrote, quote,
17 we are hoping to have it on the shelf with the names
18 of several other familiar herbs and spices visible.
19 It needs to be close enough so that the word alum is
20 clearly visible, far enough back to show it in the 12:12PM
21 context of stuff people regularly buy. Do you see
22 that?

23 A Yes, I do.

24 Q Were you during this time period trying to
25 come up with a photograph of alum that could be used 12:12PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 in the questionnaire?

2 **A** Yes.

3 **Q** Why did you want -- well, do you agree with
4 Dr. Bishop's statement of what you were looking for
5 in terms of that photograph?

12:12PM

6 **A** Dr. Bishop's description of that photograph is
7 a photograph I was interested in seeing and trying,
8 yes.

9 **Q** Why were you looking for a photograph as
10 described in Dr. Bishop's E-mail?

12:13PM

11 **A** Well, in the course of the CV survey, you
12 know, of course, that we presented pictures and maps
13 and graphics to people, and the purpose of those
14 visual illustrations is partly to help people
15 understand what they're being told, but it's also
16 partly to supplement the oral presentation to make
17 it multimodal and more interesting and engaging so
18 that people are hearing and looking as opposed to
19 only hearing, and so partly presenting a picture
20 like this just is a break in the action so the

12:13PM

12:13PM

21 interviewer pauses, flips over a page in their
22 booklet, shows this to the respondent, the
23 respondent shifts position perhaps, takes a look at
24 this picture, and it's a moment to take a breath in
25 the course of this scenario that they're hearing,

12:13PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 and we felt that the place at which this picture
2 could appear would be a good place to break up the
3 flow, and this would be a natural thing to
4 illustrate at this point to supplement the story
5 that was being told in the scenario at that time. 12:14PM

6 MR. DEIHL: Could you read back the
7 question, please?

8 (Whereupon, the court reporter read
9 back the previous question.)

10 Q Were you trying to show the respondents that 12:14PM
11 alum was harmless by showing it on a supermarket
12 shelf?

13 A No.

14 Q Why did you want to have a picture of alum
15 with other herbs and spices visible in the picture? 12:14PM

16 A I believe the text of the questionnaire says
17 you can buy it in the grocery store, and so we
18 wanted the picture to look like a grocery store.

19 Q Do you know if the alum that you buy in the
20 grocery store is the same type of alum that would be 12:14PM
21 used to spread on fields to treat phosphorus?

22 A If -- you said would. I need to know the
23 conditional on what.

24 Q Did you discuss with any of the natural
25 scientists whether the alum that's used in the 12:15PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 supermarket is the same as the alum that's used to
2 treat phosphorus?

3 **A** I did not.

4 **Q** Do you know whether the alum that's sold in
5 the supermarket is the same as the alum that's used 12:15PM
6 to treat phosphorus in the field?

7 **A** No, I do not.

8 **Q** Did it matter to you whether or not the alum
9 that's sold in the supermarket is the same as the
10 alum that's used to spread on fields to treat 12:15PM
11 phosphorus?

12 MS. MOLL: Objection to form.

13 **A** Yeah. So you're using the phrase did it
14 matter, and I don't -- I'm not going to be able to
15 answer questions did it matter today. So if you 12:16PM
16 wouldn't mind, I'll ask you to rephrase each one of
17 them, and if you could rephrase that one, it would
18 allow me to answer it.

19 **Q** In terms of designing a survey that you
20 believed would result in an accurate estimate of 12:16PM
21 willingness to pay, was it important to you to know
22 whether the alum that's used in the supermarket is
23 the same as the alum that's spread on fields to
24 treat phosphorus?

25 **A** No. 12:16PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Q Why not?

2 A I don't know why it would be.

3 Q Okay. Do you know if anyone modeled the
4 effects of alum on the Illinois River watershed?

5 A No. 12:17PM

6 Q No, you don't know?

7 A Correct.

8 Q Who interacted with the natural scientists on
9 the economics team?

10 A I think you're asking me who on the economics 12:17PM
11 team interacted -- excuse me. Who on our survey
12 design team interacted with the natural scientists
13 who worked on this project?

14 Q Yes.

15 A We had at least one conference call where 12:17PM
16 multiple team members were on with one or more
17 natural scientists. I believe there were actually
18 multiple phone calls I might have been on, but Rich
19 Bishop is the person who -- and the entire team,
20 other than me and Barbara Kanninen, met with the 12:18PM
21 natural scientists before I joined the project, and
22 other than that, Rich Bishop was our main liaison
23 with the natural scientists.

24 Q What was the purpose of interacting with the
25 natural scientists? 12:18PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**113**

1 particular plan, but we -- the long history of
2 contingent valuation has established this method as
3 one where values can be generated as long as that
4 solution is plausible and understandable to
5 respondents, even if the solution is not one that
6 can actually be accomplished or would be effective.

12:20PM

7 So in other words, if we propose a solution today,
8 respondents value it, the good that would be
9 provided by that solution plan, and then later we
10 learn that the solution plan wouldn't actually work,
11 that does not invalidate the measurement of values
12 made with it. Now, of course, if we learn later
13 that the solution plan can work, that doesn't
14 enhance anything either in changing the validity of
15 the value of measurement.

12:21PM

12:21PM

16 **Q** What is the purpose of talking to the natural
17 scientists in an effort to describe the injury
18 accurately?

19 **A** I think you just answered your own question.
20 In other words, that the purpose of talking to the
21 natural scientists is because they studied the
22 injury and, again, I'm using the term injury
23 technically here to refer to changes in the
24 watershed, and that we are describing changes in the
25 watershed to our survey respondents with our

12:22PM

12:22PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**114**

1 questionnaire, and so we want the natural scientists
2 to help us understand whether our description is
3 consistent with their understanding of the changes
4 that occurred in the watershed.

5 **Q** And why did you try to make sure that your 12:22PM
6 description in the questionnaire of the injury is
7 consistent with the natural scientists'
8 understanding of changes that occurred in the
9 watershed?

10 **A** Because we were asked to value those changes. 12:22PM

11 **Q** And in order to value those changes, it's
12 necessary to accurately describe the injury?

13 MS. MOLL: Objection to form.

14 **A** In order to value those changes, it's
15 necessary to value those changes. So in other 12:23PM
16 words, our survey assesses value of the changes we
17 describe, and so in the context of this lawsuit, in
18 order for the survey to be applicable and valuable
19 to the court, the description of the injuries -- it
20 was sensible for us to work to maximize the match of 12:23PM
21 our description of the injuries to the injuries that
22 the court would consider.

23 **Q** You used the word sensible. What did you mean
24 by sensible?

25 **A** Could you read the sentence, please?

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**115**

1 (Whereupon, the court reporter read
2 back the previous answer.)

3 **A** Thank you. A synonym would be desirable or
4 wise.

5 **Q** Okay. Dr. Krosnick, I've handed you what's 12:24PM
6 been marked as Deposition Exhibit No. 10, which is
7 another series of E-mails. The top one is dated
8 January 13, 2008 from David Chapman to you and
9 Colleen Donovan, and I'd like you to take a look at
10 the E-mail at the bottom of the page, which is from 12:25PM
11 you to David Chapman dated January 12th, 2008. Do
12 you see that?

13 **A** Yes, I do.

14 **Q** What were your comments about in this E-mail;
15 do you know? 12:25PM

16 **A** Okay. I think you're asking me to explain the
17 E-mail. So the discussion here has to do with
18 preparing for what we called one of the hotel data
19 collections. So we were going to go to a hotel in
20 Oklahoma, and dozens of people were going to come 12:26PM
21 and sit at tables in a room and have the
22 questionnaire read to them, and they would answer
23 questions on paper, and we were preparing the
24 materials to be given to the participants during
25 those sessions, and my first sentence here, the 12:26PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**116**

1 ballot looks great, refers to a piece of paper that
2 the participants would use to indicate their votes
3 during the interview, and then the second paragraph
4 says, quote, the need for the paper maps depends on,
5 one, how big the projection screens will be. I'll
6 skip a little bit, and two, how many feet between
7 the screen and the last row of participants, closed
8 quote. What I'm referring to there is the question
9 of whether we needed to print out maps to give to
10 each participant to have in front of him or her on
11 the table or whether the projection of the maps on
12 the screen would be sufficiently visible for
13 everyone that the paper was not needed, and the rest
14 of the E-mail simply refers to me offering to print
15 out the maps if that would save some time getting
16 ready before travel to Oklahoma.

12:26PM

12:27PM

12:27PM

17 **Q** What were you trying to accomplish by making
18 these suggested changes?

19 **A** I don't think I suggested any changes here.

20 **Q** Well, by making the suggestion that the need
21 for paper maps depends on how big the projection
22 screen will be and how many feet between the screen
23 and last row of participants, what was the purpose
24 of those comments?

12:27PM

25 **A** Well, we were trying to decide whether simply

12:27PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**117**

1 to show the maps on a projection screen for everyone
2 to see at once on the wall or whether we should also
3 give them those same maps on a piece of paper, each
4 person to have in front of him or her during the
5 session, and the goal was to determine whether the
6 screen would be large enough and the projection
7 would be visible enough so even the people in the
8 last row of the room could see, the back row of the
9 room could see the map image sufficiently clearly.

12:28PM

10 So if the projection screen was to be very small and
11 the last row was to be very far away, then we would
12 give them paper maps to supplement so they could
13 actually see the map details as closely as they
14 wished.

12:28PM

15 **Q** Were you involved in setting up for these
16 focus groups and these hotel studies?

12:28PM

17 **A** What do you mean by setting up?

18 **Q** Well, setting the stage for them in the way
19 that's reflected in this E-mail, making sure that
20 the screen was the right size, that the room -- how
21 the room was set up, those kind of things, the
22 logistics.

12:29PM

23 MS. MOLL: Objection to form.

24 **A** I expressed opinions, but I didn't -- I wasn't
25 responsible for those decisions.

12:29PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **Q** You were just providing input about those
2 decisions?

3 **A** Correct.

4 MR. DEIHL: Why don't we take a tape
5 change. 12:29PM

6 VIDEOGRAPHER: We are off the Record. The
7 time is 12:29 p.m.

8 (Following a lunch recess at 12:29
9 p.m., proceedings continued on the Record at 1:39
10 p.m.) 01:39PM

11 VIDEOGRAPHER: We are back on the Record.
12 The time is 1:39 p.m.

13 **Q** Dr. Krosnick, I've handed you what's been
14 marked for purposes of identification as Deposition
15 Exhibit No. 11. Do you have that in front of you? 01:39PM

16 **A** Yes, I do.

17 **Q** And this is an E-mail exchange between you and
18 Mr. Silver; correct?

19 **A** Looks like it, yes.

20 **Q** And in the bottom E-mail on the page somebody 01:40PM
21 wrote, hi, Michael. I hope you're doing well. I
22 sent you a couple E-mails over the last week or so
23 with some questions about sources that might be
24 relevant for the hypothetical bias review I'm doing
25 for the Oklahoma project. Do you know what he's 01:40PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 referring to when he says the hypothetical bias
2 review I'm doing for the Oklahoma project?

3 **A** Yes, I do.

4 **Q** What is it?

5 **A** The team decided to gather up and evaluate 01:40PM
6 studies that had been done in the past on
7 hypothetical bias to understand what they showed,
8 and that's what he was doing.

9 **Q** And why did the team decide to do that?

10 **A** Because we knew that was a criticism that had 01:41PM
11 been mounted of CV in some publications, and we
12 wanted to understand that criticism and the nature
13 of the evidence.

14 **Q** Who was responsible for gathering up that
15 information? 01:41PM

16 **A** Michael Hanemann gathered some of the
17 articles, and Michael Silver gathered some of the
18 articles, and I may have suggested some of them to
19 look at as well.

20 **Q** Dr. Krosnick, I've handed you what's been 01:41PM
21 marked as Deposition Exhibit No. 12, which is an
22 E-mail chain dated January 13th, 2008. Do you have
23 that in front of you?

24 **A** Yes, I do.

25 **Q** I'd like to focus your attention on the E-mail 01:42PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 in the center of the page, which is an E-mail you
2 wrote to Colleen Donovan and David Chapman --

3 **A** Uh-huh.

4 **Q** -- referring to alum pictures. Do you see
5 that? 01:42PM

6 **A** Yes, I do.

7 **Q** And can you read your response or can you read
8 your E-mail?

9 **A** Read it aloud?

10 **Q** Yes, please. 01:42PM

11 **A** Wow. My dream-come-true alum picture. I like
12 the one showing more of the tops better. Gorgeous.
13 Probably better when accompanied by pickle jar and
14 ingredient list, but we can go with this for sure
15 tomorrow if you like. 01:42PM

16 **Q** Do you recall what picture you were referring
17 to in this E-mail?

18 **A** No.

19 **Q** You don't know why this was your
20 dream-come-true alum picture? 01:42PM

21 **A** I'd have to see the picture.

22 **Q** Okay. What was your dream-come-true alum
23 picture?

24 **A** I don't remember what we were discussing at
25 that time, but my -- as I mentioned to you earlier, 01:43PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**121**

1 today, the discussion of adding an alum picture into
2 the presentation for the respondents was motivated
3 by the desire to do two things: To break up the
4 presentation with a visual display but also to have
5 that visual display match what the text said, and so
6 the text said you can buy alum in the grocery store,
7 and so what I was looking for was a picture that
8 presented alum in an image that made it look like it
9 was in a grocery store, and so my best guess is if
10 we looked at the picture accompanying this E-mail,
11 it's the picture of alum that ultimately ended up in
12 the survey that showed alum next to other spices on
13 the spice rack as we discussed earlier.

01:43PM

01:43PM

14 Q Okay. How did you select the recovery time
15 for the alum treatment?

01:44PM

16 MS. MOLL: Objection to form.

17 A I didn't select it.

18 Q Who selected the recovery time?

19 A I don't know.

20 Q Do you know who selected the recovery time
21 without the alum treatment?

01:44PM

22 A No.

23 Q Were you involved in any discussions about the
24 selection of the recovery time for the alum
25 treatment?

01:44PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

122

1 **A** Yes.

2 **Q** Tell me about those discussions.

3 **A** I don't remember their content but I remember

4 that there are -- there's a number of recovery times

5 in the questionnaire, and one of them is with the

01:45PM

6 scope instrument having to do with -- I guess two of

7 them are in the scope instrument, the natural

8 recovery time without alum and the accelerated

9 recovery time with alum in the scope instrument, and

10 I have a memory of our discussing those times, but I

01:45PM

11 have no recollection of the content of those

12 discussions.

13 **Q** Do you recall who you discussed it with?

14 **A** No.

15 **Q** Is it possible that the results of the CV

01:45PM

16 survey could have been different if the recovery

17 times had been different in the proposed solution?

18 **A** Yes.

19 **Q** Is it possible that the results of the survey

20 could have been different if the negative impacts of

01:46PM

21 alum treatment had been included in the proposed

22 solution?

23 MS. MOLL: Objection, form.

24 **A** I don't know what negative impacts you're

25 referring to.

01:46PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

123

1 **Q** Are you aware of any literature regarding the
2 negative impacts of alum on the environment?

3 **A** No.

4 **Q** Did you ever review any documents regarding
5 the negative impact of alum treatments on the
6 environment?

01:46PM

7 **A** There may have been one or more documents
8 distributed to the team as E-mail attachments on
9 natural science findings on alum, but I did not
10 review those documents carefully.

01:46PM

11 **Q** Why did you not review those documents
12 carefully?

13 **A** That was not part of what I was asked to do on
14 the project.

15 **Q** Dr. Krosnick, I've handed you what's been
16 marked as Deposition Exhibit No. 13, which is an
17 E-mail from you to David Chapman dated February
18 28th, 2008. Do you have that in front of you?

01:47PM

19 **A** Yes, I do.

20 **Q** In the text of the E-mail -- well, can you
21 read the text of the E-mail, please.

01:47PM

22 **A** David, I forgot to mention today that I think
23 we really need to get a good data analyst on the
24 task of doing a thorough analysis of the hotel data
25 we have now. I feel that we've been losing time on

01:48PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**124**

1 this unnecessarily. I know Edward said he'll do it,
2 but I propose to consider instead or in addition,
3 having one of my former students, Amanda Scott, do
4 the analysis quickly. She's superb. I will pay her
5 to do it if you like.

01:48PM

6 **Q** What was the purpose of doing a thorough
7 analysis of the hotel data?

8 **A** To assess the statistical patterns in those
9 data.

10 **Q** How does one go about assessing the
11 statistical patterns in this data?

01:48PM

12 **A** One can examine the frequency distributions of
13 the variables and examine cross tabulations of
14 variables and conduct regressions involving those
15 variables and do other things as well.

01:49PM

16 **Q** Did you receive approval to have Amanda Scott
17 do a thorough analysis of the hotel data?

18 **A** No.

19 **Q** Did anyone do a thorough analysis of the hotel
20 data?

01:49PM

21 **A** Yes.

22 **Q** Who did it?

23 **A** Michael Silver in conjunction with staff
24 members at Stratus.

25 **Q** In doing a thorough analysis of the hotel

01:49PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**125**

1 data, what were you seeking to accomplish?

2 **A** Well, we wanted to look at the distributions
3 of variables to be sure that they conformed to what
4 we expected them to look like, and we wanted to look
5 at the co-variation between the variables to confirm
6 that they looked as we expected them to look.

01:49PM

7 **Q** What were your expectations about what the
8 distributions of variables would look like?

9 **A** Well, we -- speaking of the entire
10 questionnaire here and so, for example, I can walk
11 you through this. If we look at -- beginning on A-3
12 of Chapman Exhibit 11, so the first questions in the
13 questionnaire are Questions 1 through 6, which ask
14 about how important it is to the respondents that
15 the State of Oklahoma pursue various goals, and our
16 goal here was to ask questions on a variety of
17 topics where respondents gave different answers to
18 the different questions, so that, in other words, if
19 a question here had asked how important is it to fix
20 pot holes at the corner of 5th and Main in Tulsa,

01:50PM

01:50PM

01:51PM

21 almost certainly the vast majority of respondents
22 would have said not important to them at all
23 personally, and that would have been a waste of a
24 question because we would have no variation of cross
25 respondents in that case. So we were looking at

01:51PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**126**

1 variation in importance here.

2 When we go to the next page, Page A-4, there
3 are questions here about what the respondents would
4 like the State of Oklahoma to do spending money and,
5 again, we were looking for variation in answers to
6 cross categories.

01:51PM

7 When we moved to Page A-6 -- stop me when I've
8 done enough of this because I'll go all the way
9 through the questionnaire. Question 13, before
10 today have you ever been interviewed like this to
11 get your opinion about whether the State should or
12 should not spend tax money for a particular purpose?
13 We had no expectations about that question, did not
14 need to examine it.

01:51PM

15 Q14, have you ever visited the Illinois River
16 or the creeks flowing into it? Again, we knew from
17 our focus groups that some people most likely would
18 say that they had done this before but not everyone,
19 and so we were looking for variation in answers
20 here, too, but we had no particular expectations we
21 needed to see confirmed.

01:52PM

01:52PM

22 Q14A and 14B, in what year did you first visit
23 or visit most recently? We had no expectations
24 other than to look at answers and to be sure that
25 respondents were not expressing confusion or

01:52PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**127**

1 difficulty with the questions.

2 Same for Q15, 15A and 15B, we expected to see
3 variation in answers to Q15 and had no particular
4 expectations about answers for 15A and 15B.

5 Same for 16. We had no particular 01:53PM
6 expectations there.

7 Would you like me to go through the whole
8 thing?

9 **Q** Yes, please.

10 **A** Before today have you heard anything about the 01:53PM
11 changes in the river or lake that I just described?
12 Q17, and Q17A, we had no special expectations there.

13 Same for 18 and 18A and 19 and -- excuse me.
14 Yeah, so 19 and 19A the purpose of these questions
15 was to ascertain whether we were providing 01:53PM

16 sufficient information for respondents to meet their
17 needs in making the judgment. So the idea here is
18 that if respondent said they would like to have
19 something reread to them, then that's something we
20 could do and did do in the actual final survey. So 01:54PM

21 it would not be a problem, but if we saw
22 respondents, a large number of respondents here in
23 19A asking for a repeat of some section of the text,
24 then that would suggest that it was read too quickly
25 or that it was written in a confusing way, and so we 01:54PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**128**

1 should work on trying to clarify that.

2 Q20 and 20A, we had no expectations about
3 answers to this pair of questions.

4 Same with 21, other than to know that from our
5 focus groups, some people had heard of alum, and so
6 we expected to see some people saying they had heard
7 of alum here.

01:54PM

8 Same for 22 and 22A, no particular
9 expectations.

10 23 and 23A are the parallels to earlier
11 questions where these would be occasions to identify
12 parts of the scenario that were either read too
13 quickly or that are written in a confusing way, and
14 so we would look to see for evidence of that.

01:55PM

15 W1 is the vote question, and our expectation
16 here was that we would see a mixture of votes for
17 and against, and we were looking for variation in
18 that answer according to the price that respondents
19 were told, which varied across people and also to
20 look for the relationship of answers to this
21 question to other questions in the survey with which
22 we thought it could be correlated.

01:55PM

01:56PM

23 We looked at answers to W1A, which are the
24 reasons why people voted for the alum, and there we
25 wanted to see whether the reasons people -- whether

01:56PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**129**

1 there are any reasons that showed up in that list
2 that would be inconsistent with the goals of the
3 survey or with economic theory.

4 Q24 was a measure of certainty, and this
5 measure was examine its relationship to voting for 01:56PM
6 or against the program to see if any relationship
7 appeared. We did not have any expectations about
8 what that would be.

9 Q25, after spreading is banned, how seriously
10 do you think the effect would be? Here we, again, 01:57PM
11 expected to see variation across people based on the
12 focus group experiences.

13 26, similarly we expected to see variation
14 here but had no strong expectations about the
15 distribution. 01:57PM

16 27, we again expected to see some variation
17 here, and this was a way to assess the extent to
18 which the description of the ban was being accepted
19 by respondents.

20 28, this is another question asking whether 01:57PM
21 respondents accepted assertions made in the scenario
22 or not.

23 29 is the same thing, whether the respondents
24 accepted assertions made in the scenario.

25 30, same thing. 31, same thing. 32, yes, 32, 01:57PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**130**

1 same thing. 33, same thing. 34, same thing.

2 35 now begins to measure beliefs about the
3 sources of the information in the scenario, so we
4 have university scientists.

5 And then in 36, the Oklahoma state government, 01:58PM
6 we assessed trust there from our focus groups. We
7 expected to see variation and to see that variation
8 co-vary with votes for or against the program.

9 In 37 we expected to see variation in answers
10 and that those answers would be related to voting. 01:58PM

11 38, 39, 40 are all questions about behavior
12 that we thought might be related to voting.

13 41 is a self-description of environmentalism,
14 where we were expecting to see variation that would
15 be correlated with votes. 01:59PM

16 42 is how long respondents had lived in
17 Oklahoma. We had no particular expectations about
18 that, and intending to move outside of Oklahoma in
19 the next year, we expected to see a small proportion
20 of respondents saying yes to that. I assume I don't 01:59PM
21 need to go into detail on age and education and
22 having children and grandchildren and paying taxes
23 and language spoken and race and income.

24 Q Okay. Thank you. When the results of your
25 analysis did not match your expectations, did you 01:59PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 modify the survey instrument to get the expected
2 results?

3 MS. MOLL: Objection to form.

4 **A** I have no memory of the results not matching
5 expectations. 02:00PM

6 **Q** This analysis that you did as reflected in the
7 E-mail, your testimony is that that analysis
8 confirmed your expectations?

9 **A** I have no memory of any instances in which the
10 results of the analysis of the hotel data 02:00PM
11 disconfirmed our expectations.

12 **Q** How frequently did you run these sort of
13 statistical analyses?

14 **A** I did not run any of these statistics
15 analyses. 02:01PM

16 **Q** You indicated Mr. Silver had run them. How
17 frequently did Mr. Silver run them?

18 **A** I'm not sure how to answer exactly. You mean
19 did he do them once a day or --

20 **Q** Yeah. How often? 02:01PM

21 **A** I couldn't tell you. I don't know.

22 **Q** Were you analyzing the results from the
23 various focus groups and pretests periodically
24 throughout the process?

25 **A** We -- after we conducted each set of focus 02:01PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**132**

1 groups, we had discussions that evening and then
2 discussions over the next days, and those
3 discussions would continue. Typically once we were
4 going to the new set of focus groups, the prior sets
5 of focus groups would rarely be discussed because it
6 was a progressive process building on the past. The
7 statistical analyses happened on various -- some
8 days somebody did a statistical analysis and some
9 days people didn't do them. So I'm not sure I'm
10 helping you but --

02:01PM

02:02PM

11 **Q** So I take it the statistical analysis was
12 dependent upon whether or not someone was interested
13 in running a statistical analysis of a particular
14 focus group or certain particular results; is that
15 right?

02:02PM

16 **A** Well, we didn't do statistical analyses of the
17 focus groups at all, and we did want to do
18 statistical analysis of the hotel data, and we all
19 agreed on that, and then eventually that work was
20 done.

02:02PM

21 **Q** Okay. Dr. Krosnick, I've handed you what's
22 been marked as Deposition Exhibit No. 14. Can you
23 identify this document?

24 **A** Yeah. This document has nothing to do with
25 this project and really shouldn't be discussed here.

02:03PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

133

1 **Q** Okay. This was in your considered by
2 materials that were provided to us.

3 **A** I apologize for that. It should not have
4 been.

5 **Q** Let me just ask you about the person who sent 02:03PM
6 E-mail in this E-mail. Can you pronounce that
7 person's name?

8 **A** Chintan Turakhia.

9 **Q** Who is Chintan Turakhia?

10 **A** Senior vice president of abt SRBI. 02:03PM

11 **Q** Okay, and who is Allison Ackermann?

12 **A** An employee of apt SRBI.

13 **Q** Did you do any work with Chintan Turakhia in
14 connection with this project?

15 **A** No. 02:04PM

16 **Q** Did you have any involvement in selecting the
17 size of the respondent pool in the final survey?

18 **A** No.

19 **Q** Who was involved in that?

20 **A** I can't tell you. 02:04PM

21 **Q** Did you have any involvement in selecting the
22 size of the respondent pool in the scope survey?

23 **A** No. Well, clarify. So I did participate in
24 discussions of the desired final sample sizes for

25 the number of interviewed people in those surveys, 02:05PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**134**

1 and that has implications for the size of the
2 respondent pool, but I did not participate in
3 decisions about the respondent pool.

4 Q Who made the decision about the desired final
5 sample sizes for the number of people interviewed in 02:05PM
6 the base and scope surveys?

7 A I think our team did jointly.

8 Q How did you make that decision?

9 A We discussed options and somehow somebody made
10 a decision. 02:05PM

11 Q You don't know, sitting here today, who made
12 the final decision?

13 A I think the team as a whole by consensus made
14 the decision.

15 Q Okay. What factors did you take into account 02:05PM
16 in deciding the size of the respondent pool?

17 A Well, when the team discussed possible
18 respondent group sizes, we took into account, first
19 of all, the budget that was available for the study
20 because that limits the total number of interviews 02:06PM

21 that can be completed, and then we focused on the
22 fact that we needed to determine a certain number of
23 bid points to be asked, which are the dollar values
24 offered in the vote question, and as the number of
25 bid points increases with a fixed sample size, the 02:06PM

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JON KROSNICK, PhD, 5-1-09**135**

1 number of respondents per bid point declines and so
2 one has to strike a balance between more bid points
3 and larger sample size and staying within the
4 budget, that there's hydraulic relationship among
5 all of these, and, lastly, we acknowledged the fact
6 that the primary purpose of the survey was to
7 generate numbers to assess the value of the -- what
8 we called the base injury, and that the purpose of
9 asking about the scope injury was simply to allow a
10 test of scope and that we did not need the same
11 statistical precision to measure the value of the
12 scope good as we did to measure the value of the
13 base good because any lack of power on the scope
14 side would work against our ability to actually find
15 a scope effect, and if we, nonetheless, observed a
16 scope effect, that would be despite that handicap in
17 the design. So we were trying to optimize a balance
18 among all of those considerations.

02:06PM

02:07PM

02:07PM

19 **Q** Can the size of the respondent pool affect the
20 validity of the survey?

02:07PM

21 **A** Yes.

22 **Q** How so?

23 **A** The larger the sample size in any survey, the
24 smaller the sampling error impact is on the results
25 observed, and sampling error comes, of course, from

02:08PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**136**

1 the process of drawing a sample randomly from a
2 population. Any random sample will depart in some
3 small ways randomly from the population, and the
4 larger the sample is, the smaller those departures
5 are. However, this relationship is not linear. 02:08PM

6 That is, as you have more and more people in the
7 sample, adding another person to the sample does
8 less and less good to improve precision. So it's
9 important to recognize that a larger sample is not
10 always notably more accurate than a smaller sample. 02:08PM
11 It depends on how big the larger sample is and how
12 big the smaller sample is.

13 **Q** What was the sampling error rate for this
14 survey?

15 **A** Okay. So the survey yielded many numbers, and 02:08PM
16 each of those numbers has a margin of error that can
17 be calculated based upon sampling theory, and we did
18 not calculate those numbers.

19 **Q** Why not?

20 **A** We didn't feel they were necessary. 02:09PM

21 **Q** Why don't you feel they were necessary?

22 **A** Well, for a sample size of a thousand
23 approximately, which is the sample size of the base
24 instrument, we know that sampling error alone on a
25 percentage is quite small. It's just a couple of 02:09PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**137**

1 percentage points. If the distribution of the
2 variable is binary and close to fifty-fifty, equal
3 numbers of people in two categories, as the
4 variation become more skewed with more people in one
5 category and fewer people in another, the sampling 02:10PM
6 error gets even smaller. So then it starts to
7 approach zero for those percentages. And so we knew
8 for all the percentages in the survey, that sampling
9 error would be very small or tiny, and to actually
10 go through and exercise calculating it wouldn't have 02:10PM
11 changed any of the conclusions that we reached from
12 the survey, and when it -- the focal number
13 calculated with the data is, of course, mean
14 willingness to pay for the good, and we did
15 calculate errors upon the percentage that 02:10PM
16 contributed to that result, as well as on that
17 result itself, and those are in the report.

18 Q Dr. Krosnick, I've handed you what's been
19 marked as Deposition Exhibit No. 15. Can you tell
20 me what this document is? 02:11PM

21 A No, I cannot.

22 Q This was in your considered by materials
23 labeled interview bid amount cross tabs dot XLS. Do
24 you know why this was in your considered by
25 materials? 02:11PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** Most likely it was sent to me.

2 **Q** Did you ask for this to be prepared?

3 **A** No.

4 **Q** In looking at this document, can you tell me
5 what you think it was analyzing?

02:11PM

6 MS. MOLL: Objection to form.

7 **A** I don't see it analyzing anything.

8 **Q** Can you tell me what you think this document
9 is?

10 **A** Well, you've said that the name of the
11 document ends with XLS, so that suggests to me that
12 it's an Excel file, which would be a spreadsheet. I
13 see voting patterns where the bid is \$245 at the top
14 and \$10 at the top and a couple of cones on the

02:12PM

15 first page, and then I see on the second page bid
16 amounts of what appear to be 10, 30, 65, 115 and
17 \$245. The names under the heading INT name might be
18 the names of interviewers. So just -- so we're
19 completely clear, I'm speculating here and you
20 shouldn't assume what I say is right. Where it says

02:12PM

21 vote zero one at the tops of those columns, those
22 may be instances where perhaps vote zero means a
23 vote against the program and one means a vote for
24 the program. So the numbers in the cells then could
25 be row percentages describing the number -- excuse

02:13PM

02:13PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 me, rows -- row -- excuse me, counts of the number
2 of respondents who voted for and against the program
3 at each dollar value perhaps for each interviewer,
4 if these are interviewers.

5 Q Did the team analyze whether bid amounts were 02:14PM
6 randomly assigned across interviewers?

7 A I don't have any recollection of a discussion
8 of that issue other than to say that the design of
9 the study is one where bid amounts should have been
10 randomly assigned across interviewers. I have no 02:14PM
11 recollection of checking it.

12 Q What effect is there, if any, if the bid
13 amounts are not randomly assigned across
14 interviewers?

15 MS. MOLL: Objection to form. 02:14PM

16 A Well, the only way that the bid amounts could
17 be not randomly assigned across interviewers would
18 be if the bid amounts were not randomly assigned at
19 all, and so in other words, the laptop computers
20 that the interviewers used to conduct the field 02:15PM
21 interviews, which I -- well, your question has
22 nothing to do with this document.

23 Those laptop computers were programmed to do a
24 random assignment of bid amount to respondent, and
25 that would also produce a random assignment of bid 02:15PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**140**

1 amount to interviewer. Now, random assignment does
2 not assure any particular distribution, but it
3 produces distributions of an expected shape, and
4 those -- we know what a purely equal distribution of
5 interviewers across bid amounts would look like 02:15PM
6 and the -- but with lower and lower probabilities,
7 it is possible to get distributions that depart more
8 and more from that expected most common
9 distribution, and so no observed distribution of the
10 relation of bid amounts to interviewers could be 02:16PM
11 taken to indicate non-randomness. Any distribution
12 is possible. It's just that some are less likely
13 than others.

14 **Q** Dr. Krosnick, I've handed you what's been
15 marked for purposes of identification as Deposition 02:16PM
16 Exhibit No. 16, which is an E-mail from you to David
17 Chapman dated September 2nd, 2008. Do you have that
18 in front of you?

19 **A** Yes, I do.

20 **Q** At the bottom of that E-mail chain is an 02:17PM
21 E-mail from David saying we have a follow-up call
22 with Barbara tomorrow at 8:00 a.m. Mountain Time
23 about bids; do you see that?

24 **A** Yes, I do.

25 **Q** And it says can you join us? 02:17PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** I see that.

2 **Q** And you indicate at the top of the E-mail that
3 you're scheduled to arrive in Frankfort an hour
4 before that?

5 **A** Yes. 02:17PM

6 **Q** Is that Frankfort, Germany?

7 **A** Yes.

8 **Q** So you were flying to Frankfort that evening;
9 you arrived on the morning of September 2nd?

10 **A** The E-mail says I'm expected to arrive then. 02:17PM
11 I don't have a specific memory if I ended up
12 traveling on that schedule or not.

13 **Q** Do you remember discussing the bids with
14 Barbara?

15 **A** We had many discussions of bids, yes, as a 02:17PM
16 group and Barbara participated in those discussions.

17 **Q** Okay. Tell me about that. Tell me about your
18 discussions with Barbara.

19 **A** I don't have any specific recollections of
20 discussions with Barbara. 02:18PM

21 **Q** Okay. You just said you had many discussions
22 with Barbara. How many?

23 **A** No. I said we had many discussions of the bid
24 amounts, and Barbara participated in some of them.

25 **Q** Okay. How many did Barbara participate in? 02:18PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** I don't know. I don't know how many
2 discussions there or how many she participated in.

3 **Q** Do you know if Barbara participated in any
4 discussions about bids?

5 **A** I believe she did, yes. 02:18PM

6 **Q** More than one discussion?

7 **A** Yes, more than one.

8 **Q** More than two?

9 **A** I don't know.

10 **Q** Why was Barbara brought onto the team? 02:18PM

11 **A** To help with statistical data analysis.

12 **Q** Is that your understanding of her expertise,
13 statistical data analysis?

14 **A** My understanding is that the primary reason we
15 asked her to join the team was to help with 02:18PM
16 statistical data analysis.

17 **Q** How did the team make the decision to increase
18 the maximum bid amount to \$405 in the final survey?

19 MS. MOLL: Objection to form.

20 **A** By the same method that we made all decisions 02:19PM
21 where we discussed considerations and reached a
22 consensus as a group.

23 **Q** Who was involved in the discussion to increase
24 the maximum bid amount to \$405?

25 **A** All of the team members. 02:19PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**143**

1 **Q** What were the considerations that you took
2 into account in making a decision to increase the
3 bid amount to \$405?

4 MS. MOLL: Objection to form.

5 **A** Yeah. I wouldn't describe it as increasing 02:19PM
6 the bid amount. We were specifying various bid
7 amounts and the -- in talking through the pros and
8 cons of various bid configurations, as I mentioned
9 earlier, the one consideration is the more bid
10 amounts you have, the smaller the sample size is for 02:20PM
11 each bid amount, given a fixed sample size, and I
12 believe -- I may be misremembering, but I believe
13 the budget for the final survey was not necessarily
14 firmly determined until fairly late in the game. So
15 there may have been some flexibility with the budget 02:20PM
16 and how many people we could interview and,
17 therefore, how many bid amounts we could afford to
18 include in the survey.

19 Now, if we had an infinite number of bid
20 amounts, if we had a bid amount at every dollar 02:20PM
21 value from zero to infinity, then that would produce
22 the maximum accuracy in assessments of values of the
23 good but, of course, no survey can have an infinite
24 number of bid amounts, so we have to be finite. As
25 we choose less than infinity bid amounts, we cause 02:21PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**144**

1 our value estimate to be lower than the true value,
2 and the fewer bid values we have, the more we
3 underestimate true willingness to pay for the good.
4 The lower -- the highest bid amount is the more we
5 underestimate willingness to pay as well. So we 02:21PM
6 always have the goal of having as many bid amounts
7 as possible spread as widely as possible in a range
8 in which we will see variation in responses to those
9 bid amounts to produce the most accurate measurement
10 of willingness to pay with the least underestimate 02:21PM
11 of maximum willingness to pay, and so at the time
12 that we specified the top bid to be \$405, that
13 decision was informed by all of these
14 considerations, the budget, the projected sample
15 size, the distributions of bids -- of votes that we 02:21PM
16 had seen at other bid amounts in the work that we
17 had done so far and the desire to produce as
18 accurate as possible a measurement of willingness to
19 pay.
20 Q Prior to settling on the \$405 bid amount, you 02:22PM
21 had pretested a top bid amount that was lower than
22 that; correct?
23 A Yes.
24 Q Why didn't you use the top bid amount that you
25 had pretested instead of settling on the \$405 bid 02:22PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**145**

1 amount?

2 **A** As I said, the lower the top bid is that we

3 offer, the less accurate our measurement of

4 willingness to pay is. We understate that true

5 value more and more, and so based on the results

02:22PM

6 that we had seen and what we knew to be the budget

7 for the survey, that we felt it was the wise

8 decision to make to be as accurate as we could be

9 within those constraints and to underestimate value

10 as little as possible.

02:23PM

11 Now, in the prior tests the sample sizes were

12 smaller, and so with the smaller sample sizes, that

13 restricted the number and range of bid amounts that

14 we could test, but when we finally moved into the

15 last phase of the actual survey conduct, then that's

02:23PM

16 when we had our largest sample of 1,000 respondents,

17 and that's when we could afford to maximize the top

18 bid amount.

19 **Q** Why didn't you pretest the \$405 top bid

20 amount?

02:23PM

21 **A** As I just described, the pretest had much

22 smaller samples and so the smaller samples were

23 intended to give us the statistical power to assess

24 votes reliably given that constraint.

25 **Q** Is there any magic to your selection of a \$405

02:24PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 top bid amount as compared to a \$450 top bid amount?

2 MS. MOLL: Objection to form.

3 A I'm not sure what you mean by magic.

4 Q Why did you settle on \$405 as compared to
5 \$450? 02:24PM

6 A Others on the team recommended the bid amounts
7 to use based on their experience in prior CVs with a
8 range of dollar values, and I don't remember in
9 particular who made those recommendations, but I did
10 not play a role in that. 02:24PM

11 Q You relied on their recommendations?

12 A I wouldn't say I relied on them. Their
13 recommendations were made to the team, and the team
14 chose to go with the particular bid amounts that are
15 in the documents. So I can't tell you that the team 02:25PM
16 ultimately went with the dollar value that any
17 particular person recommended. The team made its
18 decision in the end.

19 Q Did anyone on the team have concerns about
20 raising the bid amount in the final survey to \$405? 02:25PM

21 A Not that I recall.

22 Q Dr. Krosnick, you have in front of you
23 Deposition Exhibit No. 17; is that correct?

24 A Yes, I do.

25 Q It's an E-mail from Michael Hanemann to Kerry 02:26PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Smith and you dated May 20th, 2008; is that correct?

2 **A** Yes.

3 **Q** And at the bottom of the E-mail is an E-mail
4 from Kerry back to Michael and yourself; right?

5 **A** Yes. 02:26PM

6 **Q** In this E-mail Kerry states, I told Kevin that
7 I sent Jon the paper and survey booklets. Do you
8 see that?

9 **A** Yes, I do.

10 **Q** Who is Kevin? 02:26PM

11 **A** Kevin Boyle.

12 **Q** Okay. What was his role in this project?

13 **A** He was a consultant.

14 **Q** To whom?

15 **A** I don't know. 02:26PM

16 **Q** Did you interact with Kevin Boyle?

17 **A** Yes, I did.

18 **Q** What did Kevin Boyle do in connection with
19 this project?

20 **A** He attended some meetings that we had as a 02:26PM
21 research team and made comments on the work that we
22 were doing.

23 **Q** Did you take into account his comments in
24 designing a survey questionnaire?

25 **A** Yes. 02:27PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 Q In this E-mail -- well, second of all, who is
2 Kerry Smith again?

3 **A** He's one of the team's peer reviewers. He's a
4 professor in Arizona.

5 Q Mr. Smith indicates I told Kevin I sent Jon 02:27PM
6 the paper and survey information booklets.

7	A	Yes.
---	----------	------

8 | Q Do you know what he's referring to?

9 **A** Yes, I do.

10	Q	What is he referring to?	02:27PM
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11 **A** He's referring to a manuscript that he wrote
12 about a survey that he conducted.

13 Q What was the nature of the survey that he
14 conducted?

15 **A** I don't remember. 02:27PM

16 Q And when you say he's referring to a
17 manuscript, is this like a draft article about the
18 survey he conducted?

19 **A** I don't remember.

20 Q What's a manuscript? 02:28PM

21 **A** It's a paper. It's a document that reports --
22 geez, I don't know how to define it. Typically it's
23 a document written by a researcher describing the
24 results of a research effort that they conducted.

25	Q	Do you know why Dr. Smith was sending you the	02:28PM
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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**149**

1 manuscript about the survey that he had conducted?

2 **A** Yes.

3 **Q** Why?

4 **A** He provided comments to the team about the

5 questionnaire we had drafted, and at one point in 02:28PM

6 the discussion, he mentioned a study that he had

7 done, and he -- we didn't understand completely what

8 he was suggesting to us about that study, and so

9 someone on the team suggested that I contact him to

10 ask him to send us a write-up of what he had done in 02:29PM

11 that study, and so those materials were sent to me.

12 **Q** And what were the survey information booklets?

13 **A** I had questionnaires I think that were used

14 with the respondents, but by the time they got to

15 me, I was told not to look at them, so I didn't look 02:29PM

16 at them.

17 **Q** In the next sentence Kerry writes, the reason

18 was that I have been told to send everything to the

19 attorneys first and not send anything directly to

20 Kevin. Do you know what he is referring to there? 02:29PM

21 **A** I'm sorry, I'm not sure what you're asking.

22 **Q** I'm asking for your understanding of what Mr.

23 Smith was writing in that sentence.

24 **A** What the sentence means? Well, the sentence

25 says the reason I had -- the reason was -- I assume 02:30PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 he's referring to telling Kevin, was that I had been
2 told to send everything to the attorneys first and
3 not to send anything directly to Kevin. I guess I
4 agree, I'm not completely sure what that sentence
5 means.

02:30PM

6 **Q** Okay. Dr. Krosnick, I've handed you what's
7 been marked as Deposition Exhibit No. 18, which is
8 another series of E-mails. The top one is an E-mail
9 from Mike Silver to you dated July 17th, 2008; is
10 that correct?

02:31PM

11 **A** Yes.

12 **Q** Can you tell me what you were discussing with
13 Mike Silver in this series of E-mails?

14 **A** I believe that what we were doing was
15 analyzing data from the hotel sessions combined, and
16 I was making suggestions to him about how to do that
17 analysis.

02:32PM

18 **Q** When you say analyzing data, what do you mean?

19 **A** I mean, conducting statistical analysis.

20 **Q** Is Mr. Silver a statistician?

02:32PM

21 **A** He is -- has expertise in the conduct of
22 statistical analyses, yes.

23 **Q** Okay. Do you have expertise in the conduct of
24 statistical analyses?

25 **A** Yes, I do.

02:32PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**151**

1 **Q** In the top E-mail, Mr. Silver writes to you, I
2 do wonder why you would not want an interaction
3 between bid amount and recovery time, open paren,
4 the variable labeled version, when it is a
5 stand-alone variable. Do you see that?

02:32PM

6 **A** Yes, I do.

7 **Q** Why didn't you want an interaction between bid
8 amount and recovery time?

9 MS. MOLL: Objection to form.

10 **A** The E-mails below suggest to me that I didn't
11 indicate that I didn't want it. I'm inferring here,
12 not having the rest of the materials, but you'll
13 notice that I have a sentence in my note to him
14 previously saying no means you don't need to use
15 this variable at all, and so that doesn't say I do
16 not want it used. It says that he didn't need to
17 use it, and so I don't -- you're asking me why I
18 didn't want something, and I'm not seeing -- I'm not
19 remembering not wanting it or seeing here that
20 evidence, so --

02:33PM

02:33PM

02:34PM

21 **Q** Do you know if you looked at the interaction
22 between bid amount and recovery time in connection
23 with this data?

24 **A** Yes.

25 **Q** Did you?

02:34PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** Yes, we did.

2 **Q** In connection with this hotel data?

3 **A** Yes.

4 **Q** Okay. Do you know what optimality criteria
5 means in connection with bid design?

02:34PM

6 **A** No.

7 **Q** In your report did you document anywhere the
8 decision you made concerning the bid structure?

9 **A** I told you I didn't make the decisions about
10 the bid structure.

02:34PM

11 **Q** Did you document anywhere the decision the
12 team made about the bid structure?

13 MS. MOLL: Objection to form.

14 **A** I'll take a look.

15 **Q** Why don't we go off the Record and give you a
16 moment to look at that, Dr. Krosnick.

02:35PM

17 VIDEOGRAPHER: We are now off the Record.
18 The time is 4:36 p.m. -- or 2:36 p.m.

19 (Following a short recess at 2:36 p.m.,
20 proceedings continued on the Record at 2:46 p.m.)

02:46PM

21 VIDEOGRAPHER: We are back on the Record.
22 The time is 2:46.

23 **Q** Before we took a break, I had asked you
24 whether you documented anywhere the decision that
25 the team made about the bid structure. Can you

02:46PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 answer that question now?

2 **A** I looked at the report during the break, and I
3 did not see any places where -- I saw where the bid
4 structure was described, but I did not see any
5 places where the rationale for the particular bid
6 point selections was described.

02:47PM

7 **Q** What was the budget for the final survey?

8 **A** I don't know.

9 **Q** You did have a budget for the final survey;
10 correct?

02:47PM

11 **A** I did not.

12 **Q** The team had a budget for the final survey?

13 **A** I don't know that there was. I just wasn't
14 involved in those financial matters at all.

15 **Q** Okay. Taking a look back at Deposition
16 Exhibit No. 18, I had asked you about the
17 interaction between bid amount and recovery time.
18 Do you remember that?

02:47PM

19 **A** Yes.

20 **Q** How did bid amount and recovery time interact?

02:47PM

21 **A** I don't recall.

22 **Q** Do you know whether or not that had any -- the
23 recovery time had any effect on willingness to pay?

24 MS. MOLL: Objection to form.

25 **A** In what data?

02:48PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**154**

1 **Q** In this data that we're talking about in this
2 E-mail.

3 **A** Well, this E-mail is not specific enough to
4 tell me what data we're speaking of.

5 **Q** In any of the data you looked at, did recovery 02:48PM
6 time have an impact on willingness to pay?

7 **A** Yes.

8 **Q** What was the impact?

9 **A** Well, recovery time was the manipulation used
10 to describe the impact of the alum, and if the 02:48PM
11 recovery time had no impact on willingness to pay,
12 then we would have seen zero willingness to pay, and
13 we saw willingness to pay greater than zero, so,
14 therefore, we know that recovery time had some
15 impact on willingness to pay. 02:49PM

16 **Q** Did you test different recovery times to
17 assess their impacts on willingness to pay?

18 **A** One of the differences between the base and
19 scope instrument was the recovery time difference
20 provided by the alum program, and that was 02:49PM
21 confounded with other differences as well,
22 particularly the difference between both the river
23 and lake recovering over a prolonged period versus
24 the river recovering very quickly and the lake
25 recovering more slowly, and so with that 02:50PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**155**

1 manipulation confound, it's impossible to identify
2 the impact of that recovery time variation.

3 Q Are you familiar with the NOAA panel's
4 guideline on contingent valuation surveys?

5 A Yes. 02:50PM

6 Q One of the NOAA panel's guidelines have to do
7 with interviewer effects; isn't that correct?

8 A That's correct.

9 Q In your opinion why was the NOAA panel
10 concerned about potential interviewer effects? 02:51PM

11 A I'll talk about how the NOAA panel discussed
12 interviewer effects, and I'll make reference here to
13 Appendix H of Chapman Exhibit 11, which for some
14 reason is not here I don't think. Can somebody
15 produce that for me? 02:51PM

16 Q Dr. Krosnick, let me hand you what's been
17 marked previously as Deposition Exhibit 11 from Dr.
18 Tourangeau's deposition, which contains Appendix H
19 for your review.

20 A Okay. So the NOAA panel said, as is quoted on 02:52PM
21 Page H-6 of the report, it is possible that
22 interviewers contribute to social desirability bias
23 since preserving the environment is widely viewed as
24 something positive. In order to test this
25 possibility, major CV surveys should incorporate 02:53PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 experiments that assess interviewer effects.

2 Q Are you familiar with the Leggett, et al, 2003
3 study, in which Kevin Boyle is an author?

4 A If you could tell me the title, I could tell
5 you better if I know it or not. 02:53PM

6 Q Okay. Do you know Kevin Boyle?

7 A Yes. We discussed him earlier.

8 Q Okay. Do you respect him as a contingent
9 valuation researcher?

10 A Yes, I do. 02:53PM

11 Q Can you show me in your report where you
12 empirically demonstrated that there was no effect
13 from in-person interviews in your study?

14 A We did not demonstrate that.

15 Q Why didn't you? 02:54PM

16 A You asked why we didn't demonstrate that
17 there's no effect of in-person interviews. I don't
18 know what you mean. What effect on what?

19 Q The NOAA guideline that you just read me on
20 Page H-6 of your report states that major CV studies 02:54PM
21 should incorporate experiments that assess
22 interviewer effects. Did you do that?

23 A We did do some analysis of it, but analysis
24 had been done prior to this study that helped us
25 make a decision on this issue as well that has been 02:54PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 published and that I'm an author of. The concern
2 expressed by the NOAA panel here has to do with
3 socially desirability bias. So what they were
4 concerned about is the idea that answering aloud to
5 an interviewer might lead people to feel pressure to 02:55PM
6 give answers that they believe would be socially
7 admirable by most people even if they didn't believe
8 that personally.

9 So to investigate that, a study that's now
10 affectionately known as the ballot box study was 02:55PM
11 conducted in which we did an experiment. Half the
12 respondents answered a CV willingness to pay
13 question about the Exxon Valdez oil spill aloud to
14 an interviewer at the end of a CV interview very,
15 very much like the one in this study, and the other 02:55PM
16 half of the respondents selected randomly were asked
17 to vote privately by answering on a piece of paper
18 that they put into a box with other ballots, and
19 that allowed them to answer the willingness to pay
20 question without orally reporting their answer to 02:56PM
21 the interviewer, and what we found there is that
22 contrary to the NOAA's panel suspicion, which was
23 based on no direct evidence at all, that there were
24 no effects of -- there was no difference between the
25 direct oral reporting to the interviewer versus the 02:56PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**158**

1 confidential reporting in the ballot box. However,
2 we did see a decline in the quality of judgments
3 that people made as a result of moving to the ballot
4 box design. That is, when people answered
5 confidentially, they were a bit less thoughtful and
6 careful in generating their answer. So that led us
7 to conclude two things: One is that the NOAA
8 panel's concerns about CV studies and social
9 desirability bias was not correct and, two, that
10 moving to the ballot box design would actually
11 enhance privacy but increase inaccuracy of
12 measurement. So we, therefore, chose to not use the
13 ballot box.

02:56PM

02:57PM

14 **Q** So I don't know if I understood you. Why did
15 you decide not to use the ballot box in this case?

02:57PM

16 **A** Because theory and prior evidence indicated
17 that using a ballot box would not change the
18 distribution of votes in a way that decreased the
19 number of votes in favor of an environmental
20 program, which is what the NOAA panel suspected
21 might occur, but it did compromise the precision of
22 the reports provided by the respondents.

02:57PM

23 **Q** And your decision not to use the ballot box in
24 this case was based on the study that you had done
25 about the Exxon Valdez case?

02:58PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** I participated in that study, along with many
2 other investigators, that's right, and it was also
3 based on a series of other considerations. So the
4 -- to use a ballot box in this study would have
5 involved another scientific compromise, which is 02:58PM
6 that once the respondents vote in the ballot box,
7 then the interviewer does not know how that person
8 voted, and the interviewer then, in order to
9 preserve that confidentiality, could not ask the
10 respondent to explain why he or she voted the way he 02:58PM
11 or she did, and that would then compromise the
12 extent of accountability that we could establish in
13 the relationship between the respondent and the
14 interviewer, and a large set of academic work shows
15 that creating accountability, as we did, which could 02:59PM
16 not be done with a ballot box, enhanced the
17 precision of measurement and accuracy of the
18 survey's final result. So to move to the ballot box
19 would then entail more compromises in the quality of
20 data that we could obtain. 02:59PM
21 **Q** Why was it important to create the
22 accountability that you did in this study?
23 **A** A great deal of research and psychology has
24 shown over the years that when people feel
25 accountable for the decisions that they make to an 02:59PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 unknown audience, that is, when they feel they will
2 have to explain the reasons for an important
3 decision to someone whose opinions they do not know
4 for sure, that causes them to be more thoughtful,
5 more diligent, to minimize bias in their reasoning
6 and to produce more accurate judgments, and we
7 wanted to do everything we could in the survey to
8 encourage accurate reports from our respondents, and
9 that's why we induced that sense of accountability.

02:59PM

10 **Q** That sense of accountability that you're
11 talking about, is there a word that you used to
12 describe that; is there a buzzword for that sense of
13 accountability?

03:00PM

14 **A** Yes. Accountability is the buzzword that we
15 use.

03:00PM

16 **Q** Okay. What is consequentiality?

17 **A** I don't know. It's not a term I use
18 regularly. I guess, as a lay person, I would guess
19 that consequentiality means that an action you take
20 will have some consequences.

03:00PM

21 **Q** Okay, but it's not a term you use in your
22 field regularly?

23 **A** Not in my own writing regularly.

24 **Q** Okay. Is it a term that researchers use in
25 connection with contingent valuation?

03:01PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**161**

1 **A** It may well be. I don't pay careful attention
2 to the vocabulary that people use. But it may be a
3 term that people use to talk about the idea that CV
4 surveys should create a sense of consequentiality.

5 If by that what they mean is when respondents, let's 03:01PM
6 say, vote on a referendum in a CV survey, that they
7 are believing that that vote will have some
8 meaningful effect on something important.

9 **Q** Do you think that the existence of social
10 desirability can depend upon the type of 03:02PM
11 environmental harm described?

12 MS. MOLL: Objection to form.

13 **A** I'm sorry, I would like to help you with this.
14 Can you restate that, please? I'm not sure I
15 understand. 03:03PM

16 **Q** You indicated that you wrote an article about
17 the Exxon Valdez case; correct?

18 **A** Correct.

19 **Q** And that article in your opinion demonstrated
20 that the NOAA panel's guidelines on interviewer 03:03PM
21 effect -- that the NOAA panel's concerns about
22 interviewer effect were not valid; is that right?

23 **A** That the premise on which their concern was
24 based is not valid, yes.

25 **Q** And what was that premise in your opinion? 03:03PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** That preserving the environment is widely
2 viewed as something positive and, therefore, subject
3 to social desirability pressures.

4 **Q** Can whether or not -- strike that. The social
5 desirability pressures that you just talked about, 03:04PM
6 do you believe that the existence of those social
7 desirability pressures depend on the type of
8 environmental harm being disturbed?

9 **A** No.

10 **Q** Okay. So it doesn't matter what the 03:04PM
11 environmental problem is; the social desirability
12 pressures is the same?

13 MS. MOLL: Objection to form.

14 **A** I believe if social desirability pressures are
15 driven by the NOAA panel's assertion here that 03:04PM
16 preserving the environment is something widely
17 viewed as something positive, that that would apply
18 across environmental problems.

19 **Q** It wouldn't matter what the environmental
20 problem was? 03:05PM

21 **A** Correct.

22 **Q** What was the -- strike that. You talked about
23 creating accountability among respondents?

24 **A** Yes.

25 **Q** Do you recall that? What happens if the 03:05PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**163**

1 respondents don't have accountability?

2 **A** Well, I can't make a general statement about
3 that. What I can tell you is that the research
4 suggests that on average that inducing a sense of
5 accountability to an unknown audience enhances the 03:05PM
6 degree of cognitive effort that respondents devote
7 to a judgment task and reduces any potential bias in
8 the judgment that they make and, therefore, enhances
9 the accuracy of their judgments, but I can't tell
10 you that in the absence of accountability, any 03:06PM
11 particular thing will happen based on that research.

12 **Q** How is accountability different from voter
13 apathy?

14 **A** I'm sorry, I don't know how to answer that.
15 They're not related constructs at all. 03:06PM

16 **Q** Okay. You indicated that you want to create
17 this accountability in the respondents, that you get
18 a more accurate result if the respondents feel
19 accountable; right?

20 **A** I said that people provide more thoughtful and 03:07PM
21 accurate judgments on average when a sense of
22 accountability to an unknown audience has been
23 created.

24 **Q** Among the study design criteria recommended by
25 the NOAA panel is a no vote or no answer option for 03:07PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 responses to the vote question; correct?

2 **A** Correct.

3 **Q** And in your study, your team made the explicit
4 decision not to implement that guideline; right?

5 **A** Correct. 03:08PM

6 **Q** Other members of the study team have testified
7 that that decision was based on your 2002 study
8 published in Public Opinion Quarterly. You know
9 what I'm talking about when I say your 2002 study in
10 Public Opinion Quarterly, don't you? 03:08PM

11 **A** Yes, I do.

12 **Q** Do you agree that your study was the impetus
13 for not adopting the NOAA panel's recommendation?

14 **A** It was one of many bases for that
15 recommendation. 03:08PM

16 **Q** What was the downside of including a no answer
17 option in connection with this study?

18 **A** Well, the accumulated literature, literally
19 over about 60 years of research, on no answer
20 options, not only in contingent valuation surveys 03:08PM
21 but in all surveys, indicates that offering a no
22 opinion option in a situation where respondents have
23 sufficient information to form a judgment has the
24 consequence of -- has two consequences: One,
25 reducing the number of people for whom one can 03:09PM

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JON KROSNICK, PhD, 5-1-09

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1 measure willingness to pay in this case or any other
2 judgment and, thereby, compromising the statistical
3 power that the analysis has, and so the goals of
4 this study were to provide accurate measurements on
5 willingness to pay from as many respondents as
6 possible in the survey sample, and this literature
7 provides a very solid basis for the belief that if
8 the no opinion option is omitted, the only effect
9 that will have is to increase the number of people
10 who will answer the question substantively if they
11 had instead been inclined to select it if offered,
12 and those judgments that would be collected in that
13 way would be just as valid as the judgments
14 collected from others who would not be attracted to
15 the no opinion option. So we collected more equally
16 valid data to represent more of the Oklahoma
17 population in the final calculation we reported.

03:09PM

03:09PM

03:10PM

18 Q So the NOAA panel guidelines for a CV study
19 conducted specifically for NRD litigation suggested
20 that you should include a no answer option, and you
21 chose not to do so in this case based on the
22 literature you just cited to me; correct?

03:10PM

23 A Correct.

24 Q And the reason you chose not to do that was
25 because you could obtain more statistical

03:10PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 information; correct?

2 **A** More equally accurate statistical information
3 from the population of Oklahoma and, therefore, more
4 fully represent them in the final calculations that
5 we reported.

03:11PM

6 **Q** Was there a concern that you'd not have enough
7 valid statistical information that caused you to not
8 follow the NOAA panel guideline?

9 **A** No.

10 **Q** Take a look at that NOAA panel guideline, if
11 you would.

03:11PM

12 **A** I'm looking on Page H-18.

13 **Q** Why did the NOAA panel think that the no
14 answer option should be included in the study
15 design?

03:11PM

16 MS. MOLL: Objection to form.

17 **A** There is no rationale offered for that
18 recommendation here.

19 **Q** Do you know why the NOAA panel thought that a
20 no answer option should be included in the study
21 design?

03:12PM

22 **A** No, I don't.

23 **Q** Do you -- if you take a look on Page A-18, the
24 first full paragraph after the NOAA panel's
25 guideline --

03:12PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**167**

1 **A** Uh-huh.

2 **Q** -- it states, as is clear from the notation,
3 the NOAA panel's recommendation was based on the
4 assumption that no answer responses would occur
5 because people were indifferent or unable to make a
6 decision, had a preference for some other mechanism
7 or were bored by the survey and wanted it to end; do
8 you see that?

03:12PM

9 **A** Yes, I do.

10 **Q** The NOAA panel suggests that one reason for
11 the no option -- no answer option was that people
12 could be indifferent; right?

03:13PM

13 **A** Well, no. Actually my view of this sentence
14 that we wrote under that paragraph is that I would
15 change the letter W to C. In other words, I think
16 it's clear from the quotation that the NOAA panel's
17 recommendation was based on the assumption that no
18 answer responses could instead of would occur for
19 those reasons. In other words, they asked -- they
20 proposed asking the follow-up question to ascertain
21 the frequency of those answers, but I think it would
22 be inappropriate to infer that they believed that
23 these would be reasons.

03:13PM

03:13PM

24 **Q** But that's what you wrote in your report, the
25 word would?

03:14PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **A** The word would is in the report, correct.

2 **Q** Okay, and that's your language; correct?

3 **A** That's in the report, and what I'm suggesting
4 is a clearer version of that sentence would use the
5 word could. 03:14PM

6 **Q** In your report you wrote the NOAA panel's
7 recommendation was based on the assumption that no
8 answer responses would occur because people were
9 indifferent; correct?

10 **A** The report uses the word would, yes. 03:14PM

11 **Q** In your opinion why did the NOAA panel think
12 that indifference was a potential deterrent to a
13 valid answer to a vote question?

14 **A** Could you repeat that, please?

15 MR. DEIHL: Could you read the question
16 back, please?

17 (Whereupon, the court reporter read
18 back the previous question.)

19 **A** Thank you. I don't have any opinion about
20 that. 03:14PM

21 **Q** Did you ask any question in the survey to
22 identify respondents who were indifferent to this
23 study?

24 MS. MOLL: Objection to form.

25 **A** No. 03:15PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 identify respondents who needed more time or
2 information?

3 **A** Yes.

4 **Q** What was that question?

5 **A** There were various questions throughout the 03:17PM
6 questionnaire asking for the need to repeat
7 information to them. We also, during our
8 questionnaire development process, thoroughly and
9 frequently asked respondents what other information
10 they might like to have or need to have in order to 03:17PM
11 make their decision, and in our focus group context
12 respondents routinely volunteered for us the need
13 for additional information when that existed. So
14 this was an issue that we investigated quite
15 thoroughly empirically in our effort. 03:17PM

16 **Q** The next reason that the NOAA panel
17 recommendation was based on the assumption that no
18 answer responses would occur because people had a
19 preference for some other mechanism; right?

20 **A** My belief is that the NOAA panel's text 03:18PM
21 suggests that they thought a no answer could occur
22 as a result of people preferring some other
23 mechanism.

24 **Q** In your opinion why did the NOAA panel think
25 that a respondent's preference for another mechanism 03:18PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 was a potential deterrent to a valid answer to a
2 vote question?

3 MS. MOLL: Objection to form.

4 **A** I have no opinions about why NOAA panel
5 believed anything. 03:18PM

6 **Q** Did you ask a question in the survey to
7 identify respondents who preferred another
8 mechanism?

9 **A** Yes.

10 **Q** What was that question? 03:18PM

11 **A** W1A, why did you vote against the alum
12 treatments.

13 **Q** And how did that tell you that the respondents
14 preferred some other mechanism?

15 **A** Well, the logic here offered by the NOAA panel 03:19PM

16 is that one reason why a respondent might have
17 offered no answer to a vote question, if that option
18 were offered to them, might be that they preferred
19 another mechanism, and if respondents preferred
20 another mechanism and were not offered that option, 03:19PM

21 their preference for another mechanism would show up
22 either in their answers to 1A, which is the question
23 about why they would vote against the program, or in
24 W -- excuse me, W1A or W2 or W3, which were the
25 suite of questions tapping people's beliefs about 03:20PM

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JON KROSNICK, PhD, 5-1-09**172**

1 the program at that time.

2 **Q** What's your understanding of the NOAA panel's
3 use of the word mechanism?

4 **A** My presumption is that they are referring to
5 the nature of the program proposed for changing an 03:20PM
6 environmental condition.

7 **Q** So the NOAA panel's phrase, preference for
8 some other mechanism for making this decision, you
9 presume is referring to the nature of the program
10 proposed for changing an environmental condition? 03:20PM

11 **A** No. I'm glad you pointed that out because I
12 was focusing on the earlier sentence you focused my
13 attention on, which didn't discuss mechanism for
14 making this decision. So, yeah. So I think a
15 reasonable interpretation, although I have no 03:20PM
16 certainty about this, of the NOAA panel's phrase was
17 that people -- they may have thought some
18 respondents could select a no answer option if they
19 preferred not -- that the decision about whether to
20 implement the program or not be based on some 03:21PM
21 decision-making process other than the survey in
22 which they were participating.

23 **Q** The NOAA panel also indicated that the no
24 answer option would apply to a respondent who was
25 bored by the survey; correct? 03:21PM

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JON KROSNICK, PhD, 5-1-09**173**

1 **A** That's not my interpretation. My
2 interpretation is that the NOAA panel proposed that
3 if a no answer option were offered in the survey,
4 some responses selecting that option could occur
5 because a respondent was bored by the survey and 03:21PM
6 wanted it to end.

7 **Q** Did you ask any questions in the survey to
8 identify respondents who were bored?

9 **A** Yes.

10 **Q** What did you ask? 03:22PM

11 **A** At the end of the interview, Page A-36 in the
12 questionnaire, the interviewers were asked how
13 attentive was the respondent, that's D-3, and that
14 is to me the question to indicate boredom.

15 **Q** Did you exclude from the survey respondents 03:22PM
16 who you determined were bored?

17 MS. MOLL: Objection to form.

18 **A** We did not determine any respondents were
19 bored.

20 **Q** Did you exclude from the survey respondents 03:22PM
21 who the interviewer reported was watching football
22 the whole time during the interview?

23 **A** No, we did not.

24 **Q** Did you exclude from the survey the respondent
25 who the reporter determined was drunk during the 03:23PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 interview?

2 **A** I believe that no interviewer determined that
3 any respondent was drunk, and if you don't mind,
4 I'll correct the Record on the earlier one. I don't
5 believe any interviewer determined that any
6 respondent watched football during the entire
7 interview.

03:23PM

8 **Q** Okay. Would it have been important to you to
9 know that a particular respondent was drunk during
10 the interview?

03:23PM

11 **A** I'm sorry, can you rephrase the question
12 without the word important so I can help you?

13 **Q** The purpose of asking these questions of these
14 respondents was to ascertain their willingness to
15 pay; correct?

03:23PM

16 **A** Yes.

17 **Q** In your opinion does it affect the validity of
18 the willingness to pay number that you were
19 obtaining from a particular respondent if that
20 respondent was drunk during the interview?

03:24PM

21 MS. MOLL: Objection to form.

22 **A** I'll answer in two ways. I'm here to offer
23 opinions as a scientist. As a scientist, I haven't
24 studied the impact of alcohol on survey responses,
25 and so I wouldn't want to offer the court an opinion

03:24PM

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JON KROSNICK, PhD, 5-1-09

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1 on that as a professional. As an ordinary lay
2 person, it seems to go without saying that if
3 somebody is drunk, that's going to impede their
4 ability to process information and make decisions.

5 **Q** But there's no literature on the impact of a 03:24PM
6 drunk respondent's answers on the validity of the
7 survey?

8 **A** I don't know of any studies of the effect of
9 being drunk on contingent valuation survey results.

10 **Q** Going back to the NOAA panel's guideline on 03:24PM
11 the no answer option, the last type of respondent
12 that the NOAA panel thought the no answer option
13 would apply to was a respondent who was impatient.
14 In your opinion why did the NOAA panel think the
15 respondent's impatience was a potential deterrent to 03:25PM
16 a valid answer to a vote question?

17 MS. MOLL: Objection to form.

18 **A** I don't have any opinions about what the NOAA
19 panel was thinking.

20 **Q** Did you ask a question in the survey to 03:25PM
21 identify respondents who were impatient?

22 **A** I would say that the Questions D2 and D3 can
23 be indications of impatience and that the
24 interviewer comments can be indications as well, but
25 we have, of course, a direct question, D7, asking 03:25PM

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JON KROSNICK, PhD, 5-1-09

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1 how impatient was the respondent.

2 Q How many respondents did the interviewers
3 classify as impatient?

4 A For the base instrument, 1.2 percent of the
5 respondents were classified as extremely impatient. 03:26PM
6 1.9 were classified as very impatient; 3.4 were
7 classified as moderately impatient; 9.8 were
8 classified -- 9.8 percent were classified as
9 slightly impatient, and 83.7 percent were classified
10 as not impatient at all. The numbers are similar 03:26PM
11 for the scope instrument.

12 Q Were the impatient responders' answers to the
13 vote question excluded from your calculation of
14 willingness to pay?

15 A I'll interpret your question as asking were 03:27PM
16 the respondents who were classified by the
17 interviewers as having been more than at least
18 slightly impatient excluded from the analyses in the
19 survey, and the answer is, no, they were not
20 excluded. 03:27PM

21 Q Is there an adjustment to votes in the actual
22 referenda to account for no shows?

23 A I think you're asking me about real elections
24 conducted by governments; is that right?

25 Q No. I'm asking you in this questionnaire, in 03:28PM

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JON KROSNICK, PhD, 5-1-09

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1 the results of this questionnaire, is there an
2 adjustment to votes to account for no shows?

3 **A** Who are -- I don't know who no shows are.

4 **Q** People who didn't respond.

5 **A** I'm sorry, can you just clarify didn't respond 03:28PM
6 to what?

7 **Q** When you sent your researchers out to field
8 the survey questionnaire, some people refused to
9 talk to you; correct?

10 **A** Correct. 03:28PM

11 **Q** Did you make an adjustment to account for
12 that?

13 MS. MOLL: Objection to form.

14 **A** I'm going to assume you're asking about an
15 adjustment about the willingness to pay numbers, and 03:28PM
16 the answer is, no, no adjustments were made.

17 **Q** Dr. Krosnick, I've handed you what's been
18 marked as Deposition Exhibit No. 19. Can you
19 identify this document?

20 **A** This is an article published in the Journal of 03:29PM
21 Public Opinion Quarterly to which we referred
22 earlier in our discussion about the impact of no
23 opinion options in surveys.

24 **Q** Are you an author of this article?

25 **A** Yes. 03:30PM

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03:31PM

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JON KROSNICK, PhD, 5-1-09**179**

1 long, didn't you?

2 **A** No. First of all, I didn't write this in
3 2002. It was published in 2002. Secondly, this
4 sentence does not say that. This sentence says that
5 a large amount of information about a set of
6 circumstances, that presentation could last as long
7 as 30 minutes.

03:32PM

8 **Q** You thought 30 minutes was relatively long,
9 didn't you?

10 **A** No. I just said as long as 30 minutes. In
11 other words, that's saying the presentation could
12 last up to 30 minutes.

03:32PM

13 **Q** How long did the average interview in your
14 Oklahoma study last?

15 **A** In the range I believe of 45 to 50 minutes,
16 although I'm not completely sure.

03:32PM

17 **Q** What was the longest interview; do you recall?

18 **A** No, I don't.

19 **Q** Dr. Krosnick, I've handed you what's been
20 marked for purposes of identification as Deposition
21 Exhibit No. 20. Can you identify this document for
22 me?

03:33PM

23 **A** No, I can't.

24 **Q** You don't know what this document is?

25 **A** No, I don't.

03:33PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 **Q** Going back to your article, Exhibit 19, that
2 was published in 2002, about the middle of the page
3 you mentioned that respondents sometimes become
4 fatigued.

5 **A** I'm sorry, which page are we looking at? 03:33PM

6 **Q** I'm sorry. I'm looking at Page 382. I
7 apologize.

8 **A** Okay.

9 **Q** Do you see at the middle of the page the
10 second paragraph under the heading Study 3? 03:33PM

11 **A** Yes.

12 **Q** Would you read that sentence?

13 **A** During survey interviews, respondents may
14 become fatigued, impatient, bored, annoyed and
15 disinterested, decreasing their motivation to engage 03:34PM
16 thoughtfully in the cognitive steps necessary to
17 optimize.

18 **Q** Is fatigue more likely with a longer
19 interview?

20 **A** Well, survey research -- researchers are very 03:34PM
21 interested in fatigue, and the presumption is made
22 that the longer an interview filled with a battery
23 of questions, uninterrupted questions, continues on
24 a wide range of topics, the more fatigued
25 respondents may become. The field does not have any 03:34PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**181**

1 measurements directly of fatigue, and at the moment
2 the studies of fatigue look at indirect possible
3 indicators of fatigue to test theories that might
4 account for patterns in those indicators.

5 **Q** According to your article, fatigue decreases 03:35PM
6 the motivation of respondents to take the cognitive
7 steps necessary to optimize their survey responses.
8 Was the fact that this interview was -- was the fact
9 that this interview so long likely to reduce
10 respondents' willingness to optimize their 03:35PM
11 responses?

12 MS. MOLL: Objection to form.

13 **A** No.

14 **Q** Was respondent fatigue a reason that you did
15 not include a no vote option? 03:35PM

16 **A** No.

17 **Q** Take a look back at Page 379 of your article.
18 The first full paragraph on that page, in the middle
19 of that paragraph it reads, but in a CV survey
20 respondents are given a great deal of information, 03:36PM
21 and this information set is usually designed to
22 answer all the questions people might have when told
23 about the situation. As a result, CV respondents
24 are likely to have the information necessary to form
25 attitudes on matters in question. Do you see that? 03:36PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**183**

1 I know what the large literature shows on which my
2 judgments are based, and so I believe the sentence
3 that is written in this document of mine that you
4 just quoted, I believe it has a solid empirical and
5 theoretical foundation, and I don't know how to link
6 that to the speculations you offered about the NOAA
7 panel.

03:38PM

8 **Q** Are you familiar with the testimony that was
9 provided to the NOAA panel before it issued its
10 report?

03:38PM

11 **A** I'm aware that testimony was provided. I
12 don't know that I ever read it.

13 **Q** Take a look at Page 381 of this article,
14 please. Near the bottom in the middle of the last
15 full paragraph, would you read the sentence that
16 begins, if respondents were voting carefully; do you
17 see that?

03:39PM

18 **A** If respondents were voting carefully at higher
19 prices, fewer people should have voted for the plan,
20 assuming that as the price rises, it exceeds
21 increasing numbers of people's willingness to pay
22 for the prevention plan.

03:39PM

23 **Q** Would you read the next sentence as well,
24 please?

25 **A** Therefore, the extent of care respondents

03:39PM

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JON KROSNICK, PhD, 5-1-09

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1 devote to answering the vote question can be gauged
2 in part by the magnitude of responsiveness to the
3 rising price.

4 **Q** So if respondents are voting carefully, one
5 would expect a smaller percentage of respondents
6 would vote for the program as the cost of it
7 increased; correct?

03:39PM

8 MS. MOLL: Objection to form.

9 **A** I'm sorry. Can I hear it again?

10 (Whereupon, the court reporter read
11 back the previous question.)

12 **A** Well, contingent on the assumption described
13 in the sentence that I read to you here, assuming
14 that as the price rises, it exceeds increasing
15 numbers of people's willingness to pay. So that's a
16 key assumption to make.

03:40PM

17 **Q** Take a look at Page 6.2 of your report,
18 please. Take a look at Table 6.1.

19 **A** Uh-huh.

20 **Q** What percentage of the respondents voted for
21 the program at the \$80 bid amount?

03:41PM

22 **A** 60.2 percent.

23 **Q** And what percentage of the respondents voted
24 for the program at the \$125 bid amount?

25 **A** 61.5 percent.

03:41PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**185**

1 **Q** Based on the criteria you set forth in your
2 2002 article, these respondents weren't voting
3 carefully, were they?

4 **A** That's incorrect.

5 **Q** Why is that? 03:42PM

6 **A** Because this result does not contradict the
7 indications of quality described in my article.

8 **Q** Looking at Section 6 of your report, who was
9 responsible for drafting Section 6 of your report?

10 **A** So that's the section that begins on Page 6.1 03:42PM
11 with the heading Distribution of Notes and Test
12 Validity?

13 **Q** Yes, that's the section.

14 **A** Thank you. I believe that a number of us
15 worked on this, and it would be inappropriate to say 03:43PM
16 that one of us was responsible for drafting it.

17 Different people drafted different parts of it at
18 different times. I believe Edward Morey did an
19 initial draft. I suggested some additional
20 sections. Colleen Kenney then worked on filling in 03:43PM

21 text. Various people edited it without my knowing
22 who was editing when, and I did additional editing
23 at various points in time, and I believe lots of
24 different people on the team contributed to the
25 final version of the chapter. So it wouldn't be 03:43PM

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JON KROSNICK, PhD, 5-1-09

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1 appropriate to say anyone is responsible for
2 drafting it.

3 Q You indicated various people edited it without
4 your knowing who was editing when. How did that
5 work?

03:44PM

6 A Well, the document in its electronic form was
7 stored on a computer I assume was at Stratus offices
8 in Boulder, Colorado, and all of the team members
9 had access to that computer using the procedure

10 called Remote Desktop, and so each of us could go in

03:44PM

11 and open a document and edit it at any time we
12 wished as long as no one else was editing it at that
13 time, and there was no record of who was doing what
14 when for me to consult. So the updated versions of

15 the document were always available to anyone. So

03:44PM

16 someone who was prepared to edit it at a given
17 moment could easily do it. They didn't have to ask
18 for it or where was it, and when they completed
19 their work, it would be immediately available to all
20 of the team to then to continue to work on at that
21 point. So that's why I didn't track who did what
22 when on this.

03:45PM

23 MR. DEIHL: Thank you. I think we need a
24 tape change.

25 VIDEOGRAPHER: We are now off the Record.

03:45PM

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JON KROSNICK, PhD, 5-1-09**187**

1 The time is 3:45 p.m.

2 (Following a short recess at 3:45 p.m.,
3 proceedings continued on the Record at 3:56 p.m.)

4 VIDEOGRAPHER: We are back on the Record.

5 The time is 3:56 p.m. 03:56PM

6 **Q** Dr. Krosnick, referring back to your 2002
7 article, Exhibit 19, in several places in the
8 article you refer to low education respondents, for
9 example, on Page 398 at Footnote 15. How do you
10 define a low education respondent? 03:57PM

11 **A** In our science, low education is always a
12 relative statement. So that in any sample of
13 participants in a research study, there is a
14 distribution of education. So in one study, for
15 example, you might have -- the highest educated 03:57PM
16 people might have gone to graduate school and the
17 least educated people might have graduated from
18 college, and in the analysis of those data, we would
19 call the college graduates the low education group
20 because they are relatively speaking low within the 03:58PM
21 distribution observed in that sample. On the other
22 hand, if you have another study that has a
23 distribution of respondents, some not having
24 attended high school at all and others have
25 graduated from high school, being -- the high school 03:58PM

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JON KROSNICK, PhD, 5-1-09**188**

1 graduates being the highest level of graduation in
2 the sample, then we might refer to the people who
3 did not attend high school as the low education
4 group. So it's always a statement relative to
5 others in the sample. 03:58PM

6 **Q** In your Footnote 15 on Page 398 of your 2002
7 article you state, no opinion responses were more
8 common among more educated respondents in these
9 studies, which is consistent with the claim that low
10 education respondents were more likely to 03:58PM
11 manufacture meaningless opinions on these issues.
12 In this context, what did you mean by low education
13 respondents?

14 **A** The same thing I just told you, that in those
15 particular studies that I'm describing, that 03:59PM
16 respondents with relatively less education as
17 compared to the samples involved.

18 **Q** So in those studies that you're referring to,
19 those respondents with comparatively low education
20 were more likely to manufacture meaningless opinions 04:00PM
21 on these issues, and in order to know their
22 education level, we'd have to look at those studies;
23 correct?

24 **A** Well, this is a relative statement here being
25 made. So, again, the statement says no opinion 04:00PM

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JON KROSNICK, PhD, 5-1-09**189**

1 responses were more common among more educated
2 respondents in these studies. So that's a relative
3 statement saying as education increased, then no
4 opinion responses also increased. So I don't
5 believe that this statement is saying even in those
6 studies that there was a group of people who would
7 be called low education; just simply that as
8 education increased, that the no opinion response
9 frequency increased in these studies.

04:00PM

10 **Q** Did you ask respondents for their education
11 levels in this survey, the survey that brings us
12 here today?

04:00PM

13 **A** Yes.

14 **Q** Is there a relationship between education
15 level and response validity?

04:01PM

16 MS. MOLL: Objection to form.

17 **A** I'm going to assume that you mean response
18 validity and surveys generally, and I think there is
19 some literature suggesting that in typical public
20 opinions surveys, that there is more measurement
21 error in responses from less educated respondents,
22 but there is no evidence of such a relationship in
23 contingent valuation surveys.

04:01PM

24 **Q** Before the break, we were talking about
25 Chapter 6 or Section 6 of your report, and you had

04:02PM

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JON KROSNICK, PhD, 5-1-09

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1 told me that the report was on a computer at the
2 Stratus offices and members of the team could go in
3 and make changes to the report; is that correct?

4 **A** I told you I didn't know exactly where the
5 computer was located but it may have been at the
6 Stratus office, and I didn't mean to suggest that
7 team members could physically go to the Stratus
8 office, but that they could use Remote Desktop to
9 edit the document.

04:02PM

10 **Q** Did you track the changes that were made by
11 different members of the team?

04:02PM

12 **A** No.

13 **Q** So, for example, if you went into the document
14 at 10:00 and made changes to the document, Dr. Morey
15 could then go in at 11:00 and make changes to the
16 same document; correct?

04:02PM

17 **A** Correct.

18 **Q** And you didn't keep track of who made which
19 change to the document?

20 **A** Correct.

04:03PM

21 **Q** Who had access to the report?

22 **A** What report when?

23 **Q** We're talking about your report in this case,
24 and I'm asking you who had access to make changes to
25 that report.

04:03PM

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JON KROSNICK, PhD, 5-1-09

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1 **A** During the period it was being written and
2 edited?

3 **Q** Yes.

4 **A** Thank you. I don't know.

5 **Q** You know you had access to it; correct? 04:03PM

6 **A** Yes, I do.

7 **Q** Do you know anyone else who had access to it?

8 **A** David Chapman. I believe all of the members
9 of the team did and some of the Stratus staff
10 members, including Colleen Kenney, but I don't know 04:03PM
11 who else did.

12 **Q** Would you agree with me that Dr. Morey has an
13 expertise in econometrics?

14 **A** Yes.

15 **Q** Who did the construct validity Logit as 04:04PM
16 reflected in Chapter 6?

17 **A** The team did.

18 **Q** Who on the team did it?

19 **A** Everyone.

20 **Q** Is there an individual who's responsible for 04:04PM
21 running the Logit program?

22 **A** No. We all did it together.

23 **Q** Describe for me how you did that.

24 **A** We sat around a conference table and looked on
25 the screen and watched the results and estimated it 04:04PM

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JON KROSNICK, PhD, 5-1-09

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1 as a group.

2 Q Who participated in that?

3 A All of the team members.

4 Q All of the authors of this report?

5 A Correct. 04:04PM

6 Q Did Dr. Morey take the first stab at drafting
7 what is now Chapter 6 of the report?

8 A I believe Dr. Morey may have drafted some
9 portions of it and been the first person to type
10 words in in the first section of this that ended up 04:05PM
11 in the section of this, but I don't know if other
12 sections had been drafted prior to him.

13 Q Did you take over from Dr. Morey in terms of
14 drafting what now is Section 6?

15 A I wouldn't say I took over. I would say he 04:05PM
16 drafted some material for some sections of Section 6
17 and that I -- at some point he stopped working on it
18 and I started to work on it and made suggestions and
19 typed words.

20 Q Why did he stop working on it and you started 04:05PM
21 working on it?

22 A I don't recall.

23 Q Have you reviewed the past damages report in
24 this matter?

25 A No. 04:06PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**194**

1 for refusal conversions?

2 **A** We were not responsible for refusal
3 conversions, but I said we participated in it, and
4 the reason we participated is because as we were
5 getting to the end of the field period, we had a

04:08PM

6 group of respondents who had been contacted and
7 declined to participate, and we also had some
8 households that had not been contacted yet, and on
9 some other national face-to-face surveys I was

10 working on at the time, I found that it was helpful
11 for the principal investigator to help out with this
12 process of contacting reluctant respondents and
13 encouraging them to participate.

04:08PM

14 So in this study, we decided that three of us,
15 Rich Bishop, Roger Tourangeau and I, would make some
16 telephone calls to some reluctant individuals and
17 encourage them to participate in the study.

04:09PM

18 **Q** Did you have more refusals than you expected
19 in this study?

20 **A** No.

04:09PM

21 **Q** You indicated that you were working on another
22 study at the time where you found that having the
23 principal investigator do refusal conversions was
24 helpful; correct?

25 **A** I participated in the refusal conversion

04:09PM

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JON KROSNICK, PhD, 5-1-09

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1 process, yes.

2 Q What was that other study you were working on
3 at the time?

4 A I am conducting a study funded by the National
5 Science Foundation where we have been asked to 04:09PM
6 evaluate a new method for conducting surveys, and
7 this study involved contacting a representative
8 sample of American households, randomly selecting a
9 household member and offering that person a free
10 laptop computer and free high speed Internet access 04:10PM
11 if they didn't have it already in exchange for
12 answering 30 minutes of survey questions per month
13 for a year and also to be paid a small amount of
14 money each month for their answers to the questions.
15 This has never been done before, and so we hired a 04:10PM
16 survey firm to conduct the work, and they sent
17 interviewers out just like the interviewers that
18 worked on this project with Westat and contacted the
19 respondents and ask them to join the panel, and some
20 respondents thought this sounded too good to be 04:10PM
21 true, that how could you be giving me a laptop and
22 free Internet service and all the rest in exchange
23 for this, and were interested in speaking to me
24 because they trust Stanford University and a
25 professor, and so I found that making telephone 04:11PM

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1 calls to those folks to answer questions about the
2 survey was very helpful in reassuring a number of
3 people who then chose to join the survey project.
4 So we thought, well, let's try that here in this
5 case as well and see if any individuals who might 04:11PM
6 have been reluctant before or difficult to contact
7 were actually willing to participate once we
8 contacted them, and what we learned in this process
9 when Dr. Tourangeau and I made our phone calls is
10 that we became convinced that Westat and their 04:11PM
11 interviewers had done an excellent job in the field
12 because we did not convert a single person who had
13 been reluctant. Even though we spoke to some, we
14 were not able to convince anyone to participate in
15 the study who had not already decided no and, in 04:11PM
16 fact, what we learned consistently from all the
17 folks we spoke with was they had been contacted
18 professionally many times by Westat as we asked them
19 to do and they knew about the study enough to make a
20 decision that they chose not to participate, and so 04:12PM
21 the conclusion for me from that experience was
22 Westat carried out their work well and that we were
23 not needed to do any extra help for them.

24 Q When you called these individuals to attempt
25 to get them to participate in the survey, what did 04:12PM

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1 you tell them?

2 **A** I told them exactly what the interviewers told
3 the respondents according to the scripts you have in
4 the appendix to the report here, all of those same
5 facts, in addition to the fact that I was a
6 professor at Stanford University and was involved in
7 the study.

04:12PM

8 **Q** Did you offer the participants in this study
9 any monetary incentive to participate in the survey?

10 **A** Yes, we did.

04:13PM

11 **Q** What did you offer them?

12 **A** Initially we offered respondents \$20 for their
13 time, and at the end of the field period we
14 increased that to \$50 per respondent.

15 **Q** When you made these calls to attempt to
16 convince people to participate in the survey, did
17 you offer them \$50 during those phone calls?

04:13PM

18 **A** Most likely I did but I don't remember for
19 sure.

20 **Q** And you said you weren't successful in
21 converting anyone?

04:13PM

22 **A** Correct, or better to say I wasn't successful
23 in recruiting anyone.

24 **Q** Take a look back at your resuT, if you would,
25 Page 20 of your resuT.

04:14PM

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1 **A** Okay.

2 **Q** And directing your attention to the middle of
3 that page approximately, there's an article by
4 Holbrook, Krosnick and Pfent; did I get that right?

5 **A** Yes, you did. 04:14PM

6 **Q** Regarding response rates in surveys by the
7 news media and government contractor survey research
8 firms.

9 **A** Yes.

10 **Q** How does this study's response rate stack up 04:14PM
11 against those discussed in your book chapter?

12 **A** It's at the high end.

13 **Q** Mr. Krosnick, I've handed you what's been
14 marked as Deposition Exhibit No. 21, which is an
15 E-mail dated October 16th, 2008, and I'd like to 04:16PM
16 direct your attention to the second page of this
17 E-mail. It's an E-mail from Colleen Donovan to Mike
18 Silver; correct?

19 **A** Well, I think we can assume that. It doesn't
20 say that explicitly but that's a reasonable 04:16PM
21 assumption.

22 **Q** Was Mike Silver reviewing the coding manual?

23 **A** Mike Silver did review the coding manual.

24 **Q** Okay, and what was the purpose of his
25 reviewing the coding manual? 04:16PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09

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1 marked as Deposition Exhibit No. 22. Can you
2 identify this document?

3 **A** Yes. This is the document we discussed this
4 morning reporting analysis that Mike Silver and I
5 did of preelection polls on referenda.

04:18PM

6 **Q** The first page of this document, Exhibit 22,
7 is an E-mail to you from David Chapman and Claire
8 Xidis dated December 31st, 2008; correct?

9 **A** Yes.

10 **Q** Why were you sending a copy of this new report
11 to Claire Xidis and David Chapman?

04:18PM

12 **A** This was the -- approximately the date when we
13 were turning over materials, all of our materials to
14 the defendants in this case and this was what we
15 generated. So it was a document to be turned over.

04:19PM

16 **Q** And this was the document that you drafted
17 with or this is the article that you wrote with Mike
18 Silver?

19 **A** Correct.

20 **Q** That we talked about this morning?

04:19PM

21 **A** That's correct.

22 **Q** This was part of the litigation effort here;
23 correct?

24 MS. MOLL: Objection to form.

25 **A** It was not a part of the litigation effort.

04:19PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**201**

1 It was funded by Motley Rice.

2 **Q** Take a look at the second page of this report.

3 There's a table labeled Table 1.

4 **A** Yes.

5 **Q** Just above that table you wrote dropping 04:20PM

6 undecided respondents yielded slightly but

7 significantly larger mean errors and slightly

8 smaller median errors. What does that mean?

9 **A** We're analyzing surveys conducted by other
10 firms, not conducted by us, and the reports of some 04:20PM

11 surveys were provided in two forms -- sorry. They

12 were provided in a form that told us the percent of

13 respondents who said they would vote for a

14 referendum, the percent of respondents who said they

15 would vote against a referendum and the percent of 04:21PM

16 respondents who we, with shorthand language here,

17 referred to as undecided respondents. That's not a

18 term all of the firms used, and there is not a clear

19 definition of exactly who fell into this category,

20 but in general we assumed these are people who, for 04:21PM

21 whatever reason, during the interview expressed a

22 reluctance to report on how they would vote on this

23 referendum, and so we could compare the results of

24 the surveys in two different ways to the actual

25 election outcomes. One was where we make the 04:21PM

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EXHIBIT M

JON KROSNICK, PhD, 5-1-09**202**

1 assumptions that once the undecided respondents
2 decide, they will decide to vote in favor of and
3 against the referendum in the same proportions that
4 the people who were decided at the time of the
5 survey would vote, and that's what this refers to. 04:21PM

6 Dropping undecided respondents actually means
7 assuming that they will vote as the -- as the
8 decided respondents will vote, and that yielded
9 slightly but significantly more mean errors and
10 slightly smaller median errors than a different 04:22PM
11 analytic approach, where we, instead of dropping
12 those respondents, assumed that half of them would
13 vote for the referendum and half would vote against
14 the referendum.

15 **Q** Does that mean that when undecided respondents 04:22PM
16 were dropped, the results had larger confidence
17 intervals?

18 **A** We are not calculating confidence intervals
19 levels here at all. So that would not be a sensible
20 conclusion to reach from this information. 04:23PM

21 **Q** Could you calculate confidence intervals based
22 on this information?

23 **A** Yes.

24 **Q** How would you go about doing that?

25 **A** Okay. I'm going to assume I understand -- I'm 04:23PM

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JON KROSNICK, PhD, 5-1-09**203**

1 going to interpret your question the following way:

2 That this analysis again is not of surveys we
3 conducted. It's an analysis of surveys conducted by
4 other organizations.

5 **Q** I understand that. 04:23PM

6 **A** And so we don't have the raw data, which tell
7 us each respondent's answer to each question. So in
8 order to calculate a confidence interval, we can use
9 the observed percentages in the reports provided by
10 these companies and the observed sample sizes in the 04:23PM
11 reports provided by these companies and use an
12 established mathematical formula to calculate a
13 confidence interval around each observed percentage.

14 **Q** Okay. Take a look at Page 3. The top of the
15 page you wrote, based on these results all 04:24PM
16 subsequent analyses calculated error when
17 apportioning undecided responses equally to voting
18 in favor and against.

19 **A** That's correct.

20 **Q** If dropping undecided voters gave you 04:24PM
21 statistically different results than you got when
22 you proportioned them equally, why did you use only
23 the equal proportioning in your analysis?

24 **A** I'm sorry. Can I have that back?

25 (Whereupon, the court reporter read 04:25PM

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JON KROSNICK, PhD, 5-1-09**204**

1 back the previous question.)

2 **A** A number of studies other than this one have

3 examined the difference between these two

4 calculation methods. That, one, based upon the

5 assumption that undecided respondents will vote in

04:25PM

6 the proportions of the decided respondents; the

7 second assuming that the undecided respondents will

8 vote about equally often for and against the

9 referendum, and in those studies and this one, the

10 assumption that the respondents will vote in about

04:26PM

11 equal proportions is the assumption that yields the

12 more accurate results. So in other words, a

13 researcher has to make some assumption, and we

14 always, when we have a choice among assumptions to

15 make, we test them to see which assumption fits the

04:26PM

16 data more closely, and in this study and others,

17 this assumption fit the data more closely and that

18 is the assumption that we then proceeded by making.

19 **Q** Why did Motley Rice fund the work for this

20 article?

04:26PM

21 MS. MOLL: Objection to form.

22 **A** We were interested in exploring the issue of

23 hypothetical bias to think through the implications

24 of that literature, and as we thought about that

25 literature and the questions it raises, it occurred

04:27PM

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JON KROSNICK, PhD, 5-1-09

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1 to us that an excellent way to evaluate the accuracy
2 of measurements made with voting questions on
3 referenda, such as used in this study, would be to
4 look at situations in which people in surveys were
5 asked to vote on referenda, and those results could
6 be compared with the results of actual referenda,
7 and so we set out to conduct this statistical
8 analysis to gauge how accurate referendum questions
9 in surveys are in matching actual election outcomes.

04:27PM

10 This has been done in the contingent valuation
11 literature in at least one study that I know of by
12 Mitchell and Carson, and they found close
13 correspondence of a referendum question in a survey
14 with voting in an election, but we felt in order to
15 reach a strong conclusion on this issue, it was
16 necessary to look at many more than just that one
17 election, so we set out to do that.

04:27PM

18 Q So why did Motley Rice fund that work?

19 A I can't speak for Motley Rice. I can tell you
20 why we recommended to doing it, and I assumed they
21 saw merit in our argument.

04:28PM

22 Q How many articles have you published or are
23 working on that involve work paid for by Motley
24 Rice?

25 A Zero.

04:28PM

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JON KROSNICK, PhD, 5-1-09

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1 proceedings continued on the Record at 4:39 p.m.)

2 VIDEOGRAPHER: We are back on the Record.

3 The time is 4:39 p.m.

4 Q Dr. Krosnick, take a look at Page 6-25 of your
5 report.

04:39PM

6 A Okay.

7 Q Do you have that in front of you?

8 A Yes, I do.

9 Q Can you tell me what Page 6-25 is about?

10 A Page 6-25 begins a two and a quarter page
11 description of the variables included as predictors
12 in the logistic regression equation predicting
13 votes.

04:40PM

14 Q My understanding of the purpose of a construct
15 validity Logit is that it evaluates the collective
16 effect of variables on a for vote; is that correct?

04:40PM

17 MS. MOLL: Objection to form.

18 A If you could strike the word collective from
19 that, that would be closer to right, but I would say
20 what it estimates is the partial associations of
21 each of the predictors with voting for the program
22 controlling for all other predictors.

04:40PM

23 Q Why did you not include age in your construct
24 validity Logit?

25 A The only variables that were included in the

04:41PM

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JON KROSNICK, PhD, 5-1-09**208**

1 construct validity equation were variables for which
2 we had some theoretical basis for anticipating an
3 effect on voting and an ability to anticipate the
4 potential direction of that association, and age is
5 not such a variable.

04:41PM

6 **Q** Why did you not include education in your
7 construct validity Logit?

8 **A** For the same reason.

9 **Q** You didn't have a theoretical basis for
10 anticipating an effect on voting based on education?

04:41PM

11 **A** Correct.

12 **Q** If you take a look on Page 6-25, there is a
13 bullet entitled Plan Implementation Without the Ban.

14 **A** Yes.

15 **Q** Why did you expect that people who thought the
16 plan might be implemented without a ban to be less
17 inclined to vote for the program?

04:42PM

18 **A** So first we didn't expect that those people
19 would or that any of these expectations were of that
20 form. As this sentence says, it says, quote, we
21 expect people who thought the plan might be
22 implemented without a ban on future spreading to be
23 less inclined to vote for the program, so I'll
24 answer a slightly different version of your
25 question, explaining where that expectation comes

04:42PM

04:43PM

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JON KROSNICK, PhD, 5-1-09**209**

1 from.

2 So the scenario that we described for
3 respondents told them that if they voted yes on this
4 plan in this survey, if they voted in favor of the
5 alum treatments, then the State would implement the 04:43PM
6 alum treatments only if courts banned future
7 spreading of alum, and the reason that makes sense
8 is that the alum treatments are described to remove
9 alum that is currently on the land and in the water,
10 but that if continued alum deposits -- excuse me, 04:43PM
11 continued phosphorus deposits are at a high level,
12 then the alum treatments as we described would not
13 be completely effective at removing their impact on
14 the environment. So the alum treatment program was
15 described as effective only if the ban was passed. 04:44PM

16 So if respondents thought that the plan would
17 be implemented, even if the ban was not put into
18 place, then what that means is that they could
19 obtain the partial benefits of this program without
20 paying the cost associated with this proposal. So 04:44PM
21 in other words, they could vote no on this proposal
22 and then wait to see whether maybe the alum
23 treatments were done anyway, even in the absence of
24 the ban, and then they would get them at no cost, so
25 that would have some appeal. 04:44PM

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JON KROSNICK, PhD, 5-1-09

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1 MR. DEIHL: I don't have any further
2 questions for this witness.

3 MR. TRIPLETT: No questions.

4 MR. JONES: No questions.

5 MR. HIXON: No questions. 04:45PM

6 MR. FREEMAN: Nothing from me.

7 MS. MOLL: No questions from me. The
8 witness will read and sign.

9 VIDEOGRAPHER: This concludes the
10 deposition. We are now off the Record. The time is 04:45PM
11 4:45 p.m.

12 (Whereupon, the deposition was
13 concluded at 4:45 p.m.)
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SIGNATURE PAGE

I, Jon Krosnick, PhD, do hereby certify that the foregoing deposition was presented to me by Lisa A. Steinmeyer as a true and correct transcript of the proceedings in the above styled and numbered cause, and I now sign the same as true and correct.

WITNESS my hand this _____ day of _____, 2009.

JON KROSNICK, PhD

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 2009.

Notary Public

My Commission Expires:

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C E R T I F I C A T E

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

I, Lisa A. Steinmeyer, Certified
Shorthand Reporter within and for Tulsa County,
State of Oklahoma, do hereby certify that the above
named witness was by me first duly sworn to testify
the truth, the whole truth and nothing but the truth
in the case aforesaid, and that I reported in
stenograph his deposition; that my stenograph notes
were thereafter transcribed and reduced to
typewritten form under my supervision, as the same
appears herein.

I further certify that the foregoing 211
pages contain a full, true and correct transcript of
the deposition taken at such time and place.

I further certify that I am not attorney
for or relative to either of said parties, or
otherwise interested in the event of said action.

WITNESS MY HAND AND SEAL this 30th day
of May, 2009.

LISA A. STEINMEYER, CRR
CSR No. 386

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CORRECTIONS TO THE DEPOSITION OF
JON KROSNICK, PhD

PAGE AND LINE NUMBER

CORRECTION

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